FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

TABLET DEVICE

MODEL NUMBER: A1599

FCC ID: BCGA1599

REPORT NUMBER: 14U17895-E1 Revision C

ISSUE DATE: September 5, 2014

Prepared for
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Revision History

Rev.	Issue Date	Revisions	Revised By
--	8/11/14	Initial Issue	F. de Anda
A	8/28/14	Updated sections 9.1.6 and 9.2.6	F. de Anda
B	9/03/14	Updated sections 5.2 and 10.1	F. de Anda
C	9/05/14	Updated sections 5.2	F. de Anda

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE
1 INFINITE LOOP
CUPERTINO, CA 95014, U.S.A.

EUT DESCRIPTION: TABLET DEVICE

MODEL: A1599

SERIAL NUMBER: F4KMV00EG535 (Conducted), F4KMQ002G3RM (Radiated)

DATE TESTED: JUNE 2, 2014 – AUGUST 5, 2014

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

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UL Verification Services Inc. By:

FRANCISCO DEANDA
PROJECT LEAD
UL Verification Services Inc.

Tested By:

TOM CHEN
EMC ENGINEER
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, KDB558074 and ANSI C63.10-2009.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☐ Chamber A	☒ Chamber D
☐ Chamber B	☒ Chamber E
☐ Chamber C	☒ Chamber F
	☐ Chamber G
	☒ Chamber H

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://ts.nist.gov/standards/scopes/2000650.htm.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	±3.52 dB
Radiated Disturbance, 30 to 1000 MHz	±4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a tablet with IEEE 802.11a/b/g/n (MIMO 2x2) and Bluetooth radio. The rechargeable battery is not user accessible.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2472	802.11b, 1TX	20.28	106.66
2412 - 2472	802.11g, 1TX	24.87	306.90
2412 - 2472	802.11n HT20 2TX CDD	27.66	583.45

List of test reduction and modes covering other modes:

Frequency Range (MHz)	Mode	Covered by
2.4 GHz band		
2412 - 2472	802.11g 2TX CDD	802.11n HT20 CDD 2TX
2412 - 2472	802.11n SISO	802.11g SISO
2412 - 2472	802.11n HT20 2TX STBC/SDM	802.11n HT20 CDD 2TX

Note: The output power on the list of reduction modes are equal to or less than those referenced.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA antenna, with a maximum gain as below table:

Frequency Band (GHz)	Antenna Gain		Uncorrelated Gain	Correlated Gain
	Tx0	Tx1		
2.4	0.81	-1.86	-0.32	2.59

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 6.25.86

The test utility software used during testing was wl 6.25 RC87.120

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X (Flatbed), Y (Landscape), Z (Portrait), it was determined that Y (Landscape) was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y (Landscape) orientation.

Worst-case data rates as provided by the client were:

802.11b Mode: 1 Mbps
802.11g Mode: 6 Mbps
802.11n HT20mode: MCS0

Radiated emissions for EUT with antenna was performed and passed; therefore, antenna port spurious was not performed.

There are two vendors of the WiFi/Bluetooth radio modules: variant 1 and variant 2. They have the same mechanical outline, same on board antenna, matching circuit, antenna structure and same specification. Baseline testing was performed on the two variants to determine the worst case on all conducted power and radiated emissions.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC adapter	Apple	A1357	N/A	NA
Earphone	Apple	NA	NA	NA
Laptop	Apple	A1278	C02HJ0A7DTY4	NA
DC power supply	Sorensen	XT 15-4	1319A02780	NA

I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	SMA	Un-Shielded	0.2	To spectrum Analyzer
2	USB	1	USB	Shielded	1	N/A
3	DC	1	DC	Un-shielded	0.8	N/A

I/O CABLES (RADIATED ABOVE 1 GHZ)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
None used						

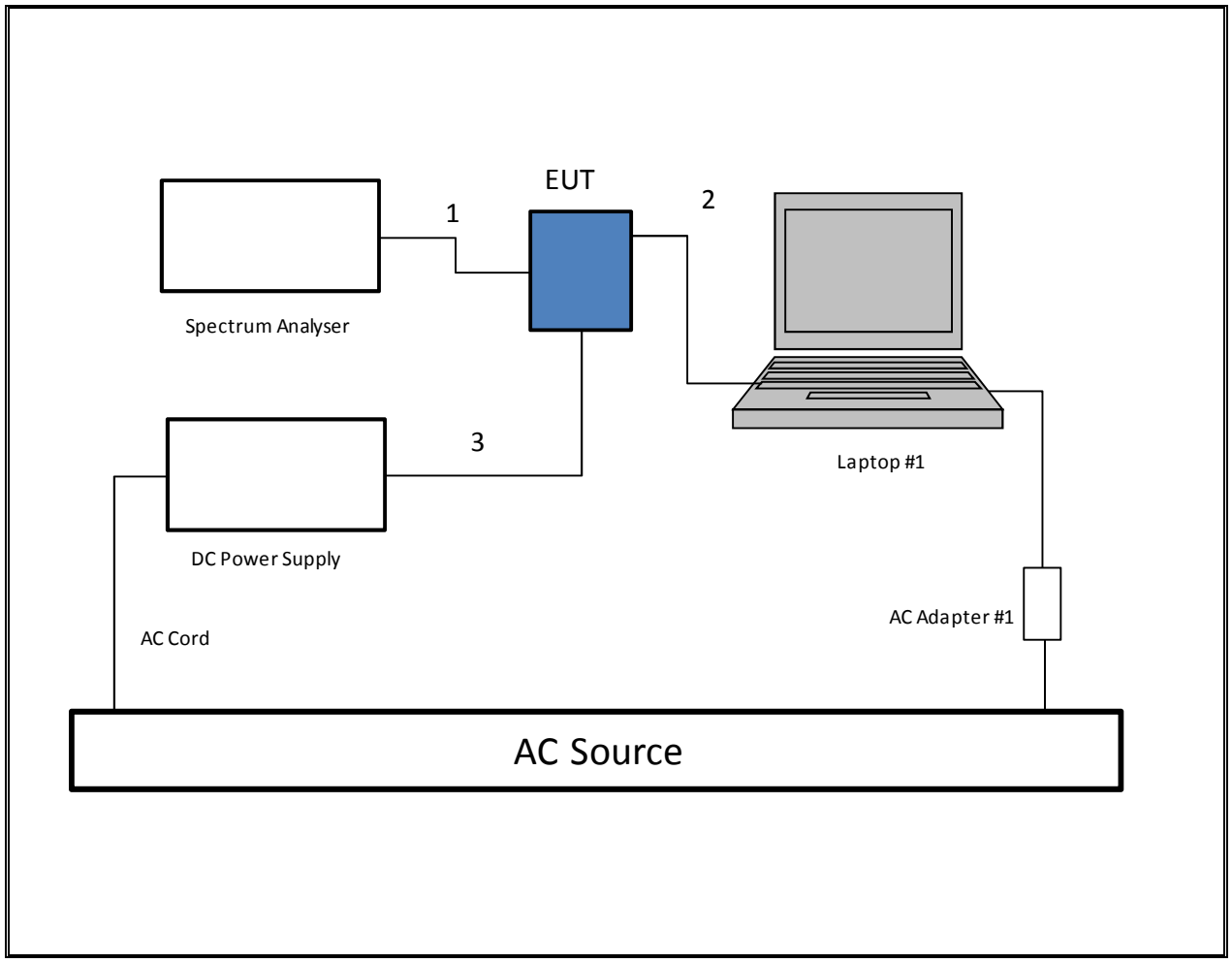
I/O CABLES (AC POWER CONDUCTED TEST and below 1 GHZ)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	US115	Un-Shielded	0.8	NA
2	DC	1	lightning	Un-Shielded	1	NA
3	Audio	1	Jack	Un-Shielded	0.5	NA

TEST SETUP- CONDUCTED PORT

The EUT was tested connected to a host Laptop via USB cable adapter and spectrum analyzer to antenna port. Test software exercised the EUT.

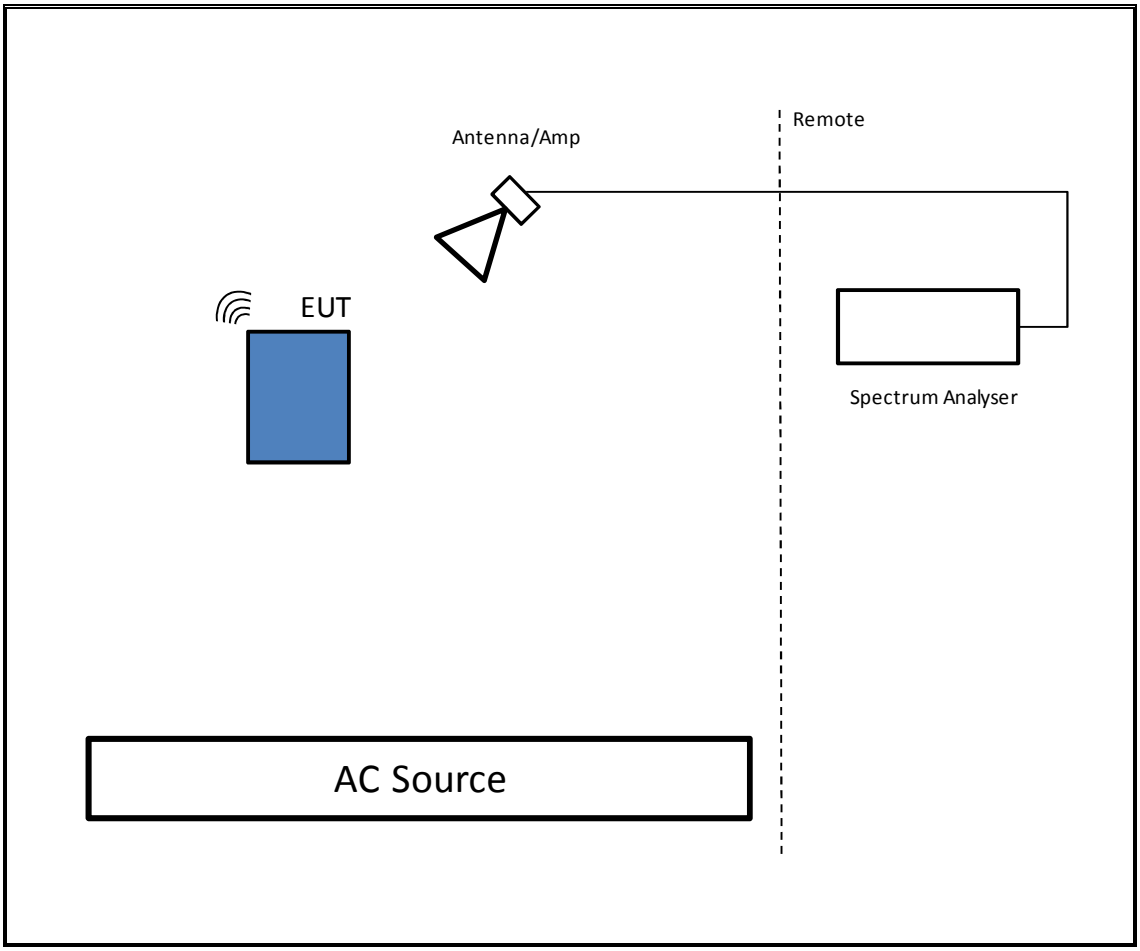
SETUP DIAGRAM



TEST SETUP- RADIATED-ABOVE 1 GHZ

The EUT was tested battery powered. Test software exercised the EUT.

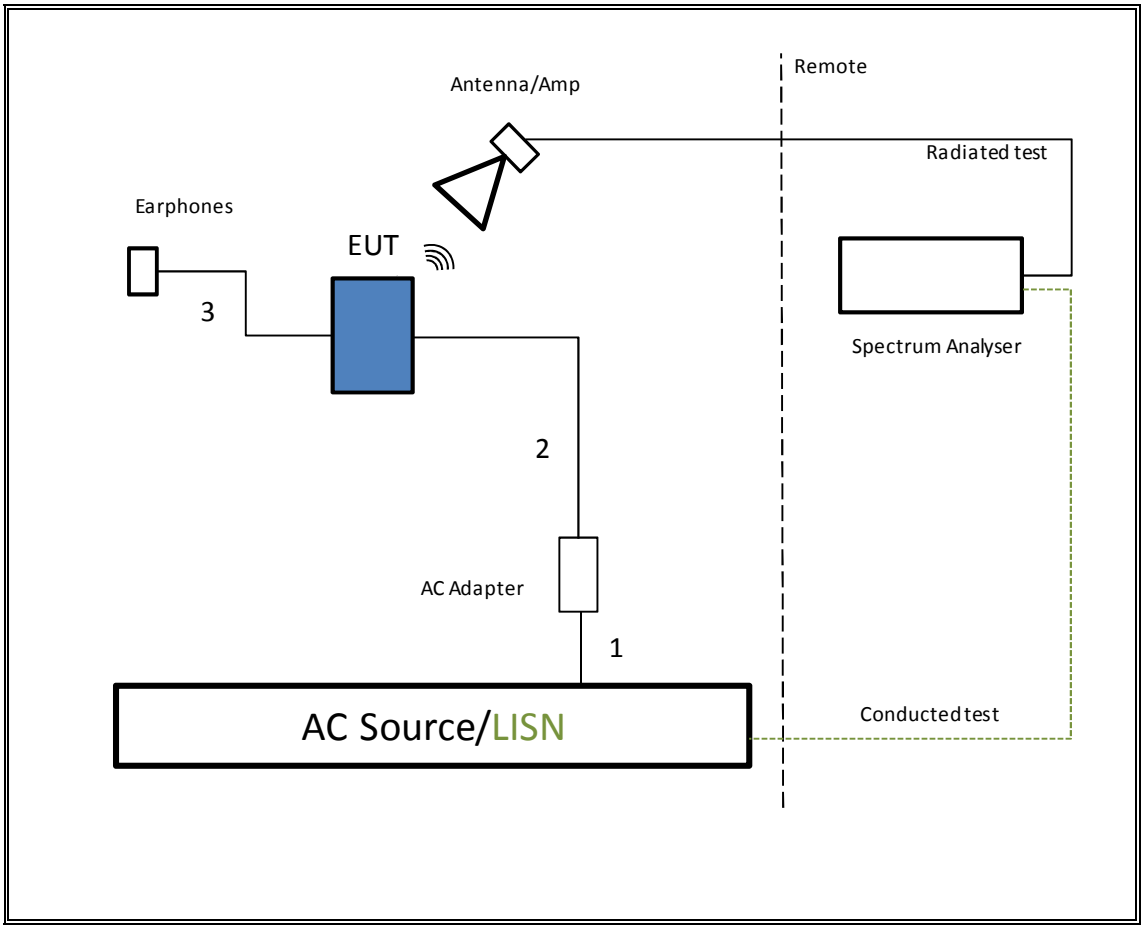
SETUP DIAGRAM



TEST SETUP- BELOW 1GHZ & AC LINE CONDUCTED TESTS

The EUT was tested with earphones connected and powered by AC adapter. Test software exercised the EUT.

SETUP DIAGRAM



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Antenna, Horn, 18 GHz	ETS Lindgren	3117	F00131	2/18/2015
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00589	1/15/2015
Peak / Average Power Sensor	Agilent / HP	N1911A	F00153	3/6/2015
Wideband Power Sensor	Agilent	N1921A	F00361	10/2/2014
Peak Power Meter	Agilent / HP	E9323A	F00025	4/30/2015
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	F00129	6/25/2015
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	F00168	3/28/2015
Preamplifier, 1300 MHz	Sonoma	310	F00008	5/28/2015
Preamplifier, 26.5 GHz	Agilent / HP	8449B	F00165	8/24/2014
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	F00092	9/9/2014
LISN, 30 MHz	FCC	LISN-50/250-25-2	C00626	1/17/2015
Antenna, Horn 1-18GHz	ETS Lindgren	3117	N/A	4/14/2015
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	N/A	5/14/2015
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	N/A	5/7/2015
Spectrum Analyzer	Agilent	N9030A	F00126	12/10/2014
Antenna, Horn, 18 GHz	ETS Lindgren	3117	C01005	3/20/2015
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	A121003	4/22/2015
Preamp, 1000MHz	Sonoma	310N	N02891	12/30/2014
Spectrum Analyzer	Agilent	N9030A	F00128	2/12/2015
RF PreAmplifier, 1-18GHz	Miteq	AFS42-00101800-25-S-42	F00354	8/24/2014

7. MEASUREMENT METHODS

6 dB BW: KDB 558074 D01 v03r02, Section 8.1.

Output Power: KDB 558074 D01 v03r02, Section 9.1.2.

Power Spectral Density: KDB 558074 D01 v03r02, Section 10.2.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v03r02, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v03r02, Section 12.0

Band-edge: KDB 558074 D01 v03r02, Section 13.3.1.

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

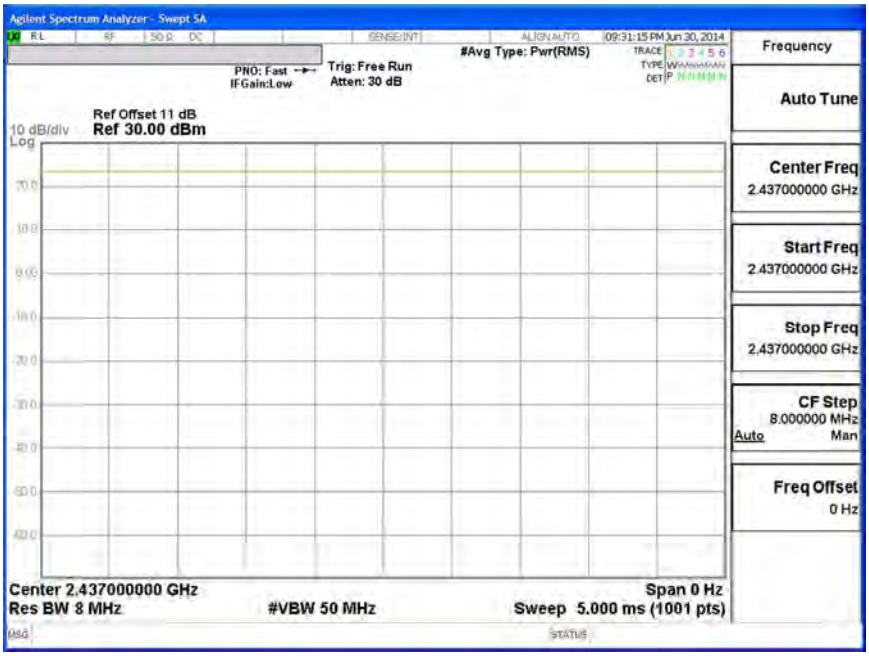
8.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
802.11b 1TX	1.000	1.000	1.000	100.00%	0.00	0.010
802.11g 1TX	2.065	2.100	0.983	98.33%	0.00	0.010
802.11n HT20 2TX	1.905	1.940	0.982	98.20%	0.00	0.010

8.2. DUTY CYCLE PLOTS

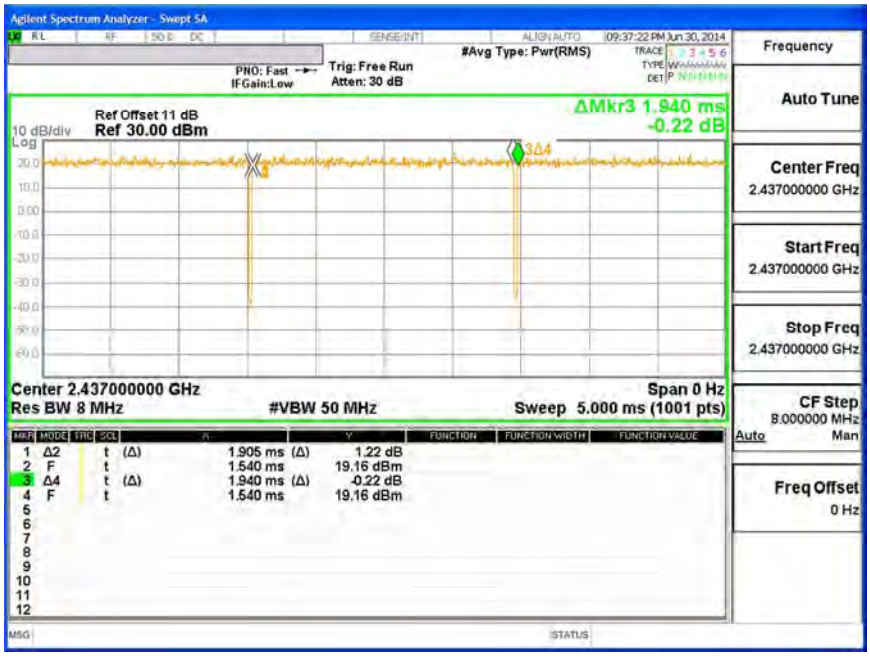
2.4 GHz BAND

DUTY CYCLE 802.11b 1TX MODE



DUTY CYCLE 802.11g 1TX MODE

DUTY CYCLE 802.11n HT20 2TX MODE



9. ANTENNA PORT TEST RESULTS

9.1.802.11b 1Tx MODE IN THE 2.4 GHz BAND

9.1.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

The minimum 6 dB bandwidth shall be at least 500 kHz.

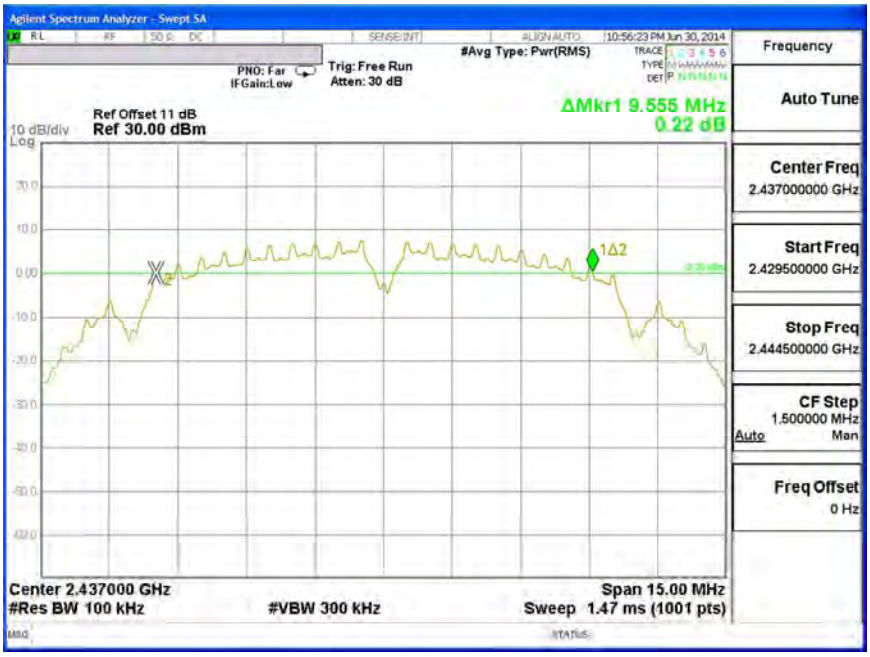
RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
1	2412	9.045	0.5
6	2437	9.555	0.5
11	2462	9.045	0.5
12	2467	9.045	0.5
13	2472	9.060	0.5

6 dB BANDWIDTH

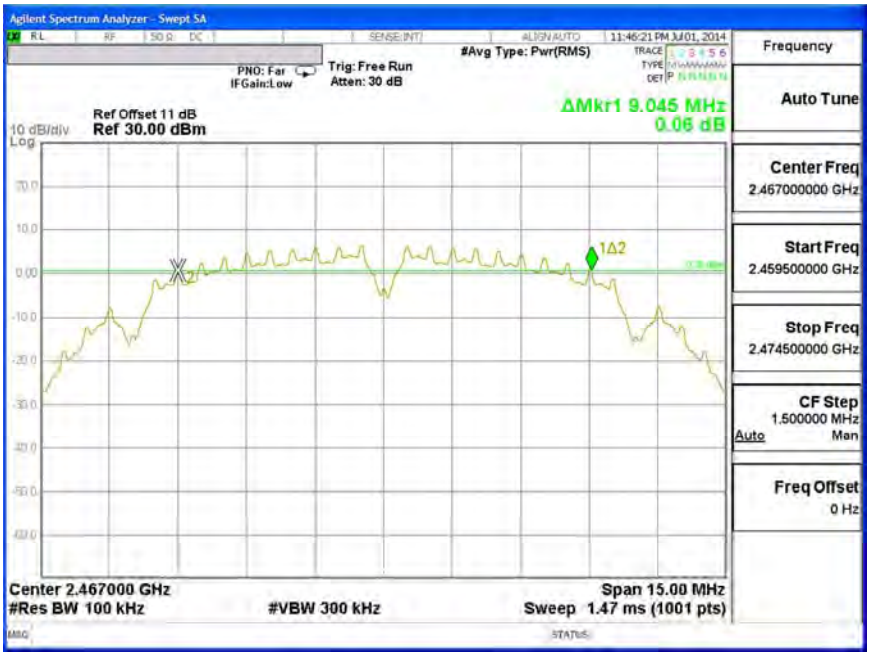
6 dB BANDWIDTH LOW CH

6 dB BANDWIDTH MID CH

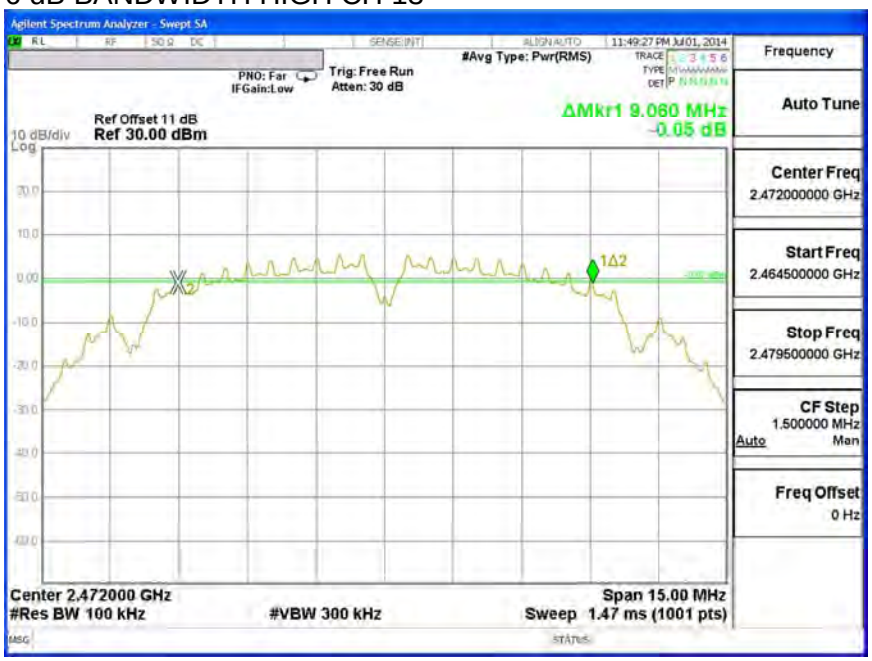


6 dB BANDWIDTH HIGH CH 11

6 dB BANDWIDTH HIGH CH 12



6 dB BANDWIDTH HIGH CH 13



9.1.2. 99% BANDWIDTH

LIMITS

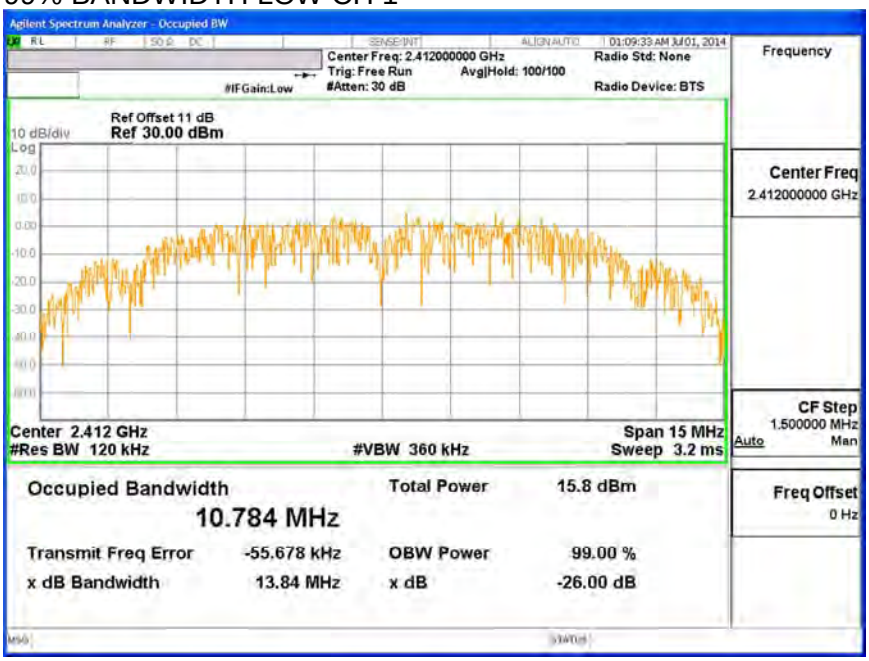
None; for reporting purposes only.

RESULTS

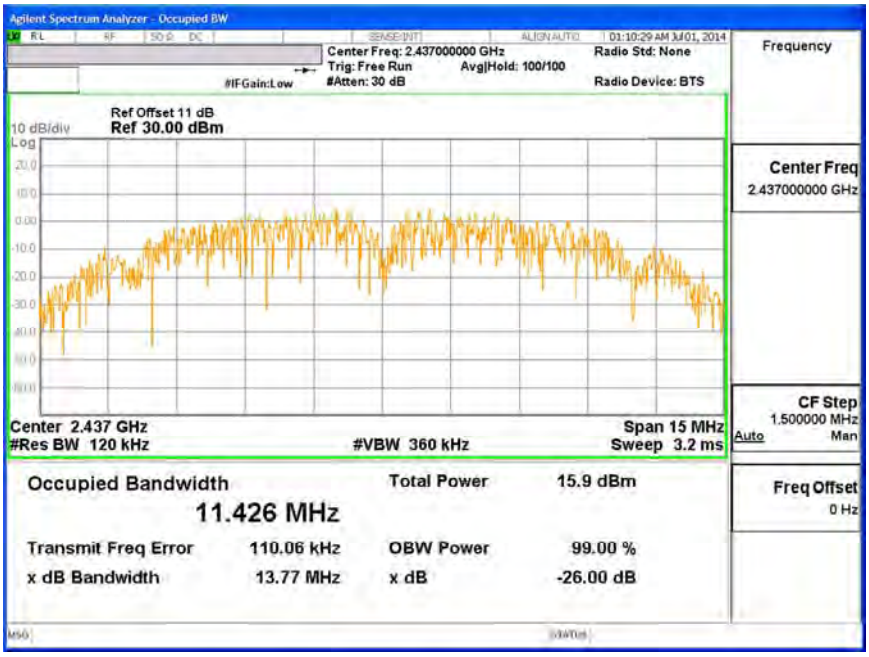
Channel	Frequency (MHz)	99% Bandwidth (MHz)
1	2412	10.784
6	2437	11.426
11	2462	11.350
12	2467	11.033
13	2472	11.258

99% BANDWIDTH

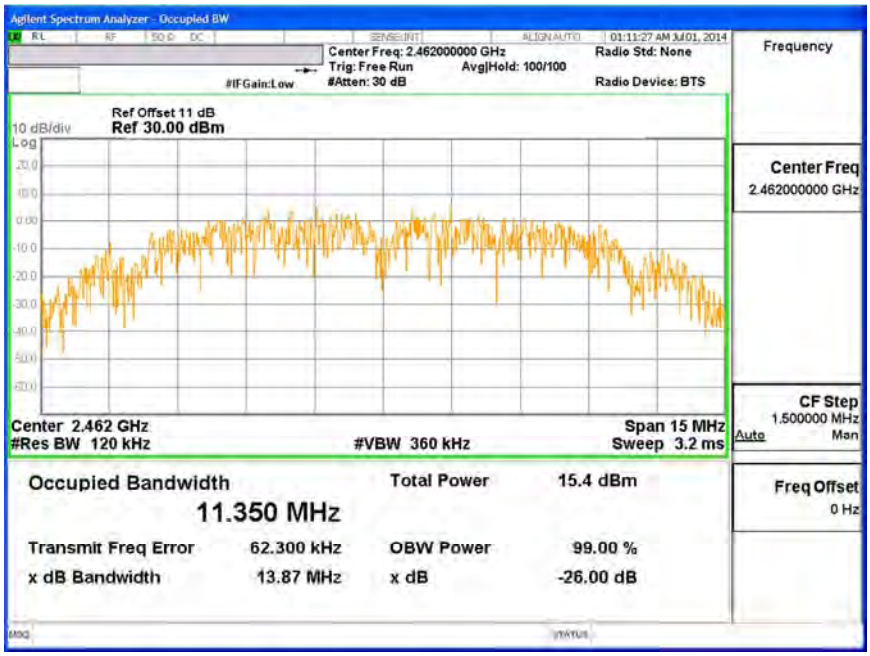
99% BANDWIDTH LOW CH 1



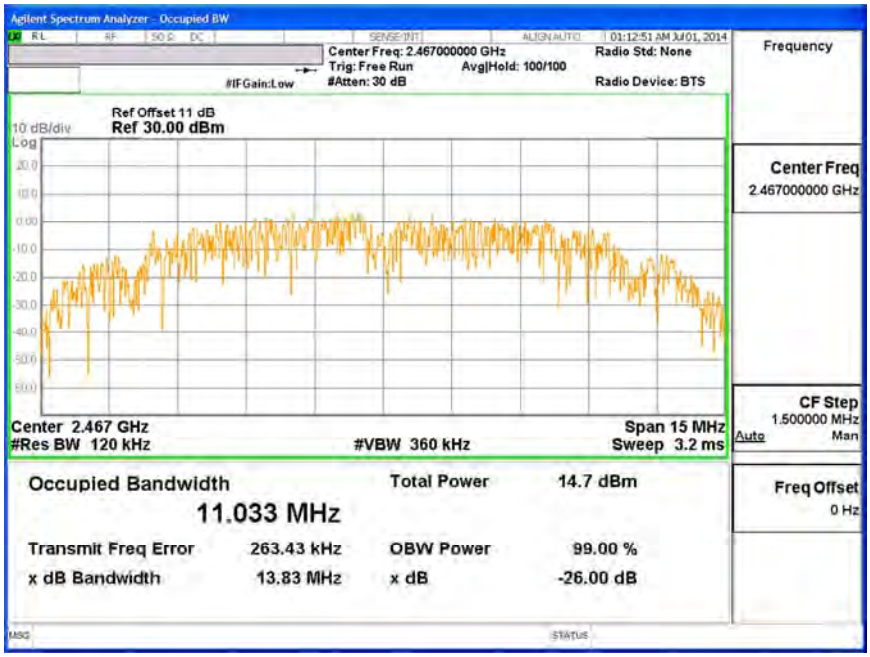
99% BANDWIDTH MID CH 6



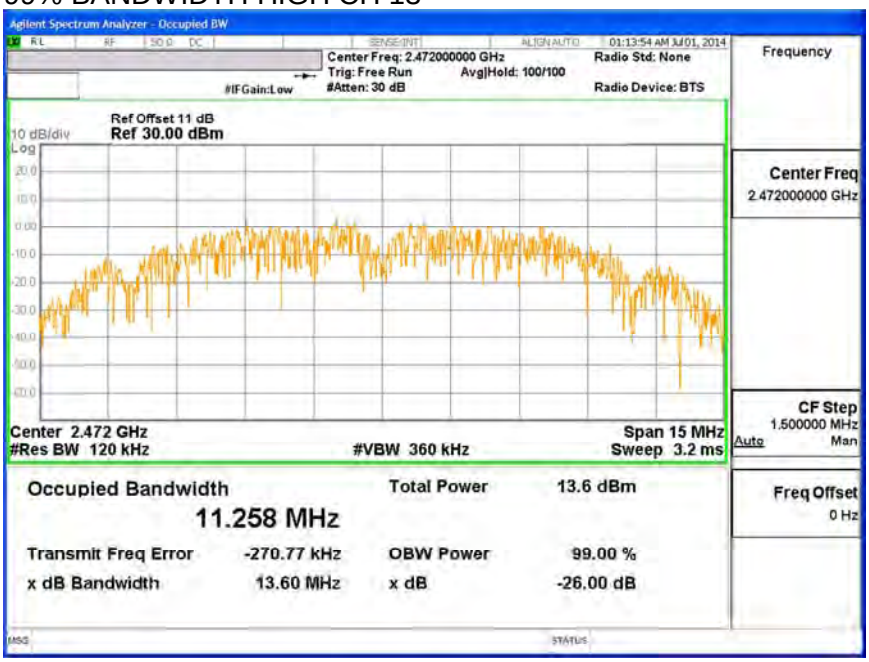
99% BANDWIDTH HIGH CH 11



99% BANDWIDTH HIGH CH 12



99% BANDWIDTH HIGH CH 13



9.1.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
1	2412	16.41
6	2437	16.50
11	2462	16.44
12	2467	15.50
13	2472	14.34

9.1.4. OUTPUT POWER

LIMITS

FCC §15.247

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	0.81	30.00	30	36	30.00
6	2437	0.81	30.00	30	36	30.00
11	2462	0.81	30.00	30	36	30.00
12	2467	0.81	30.00	30	36	30.00
13	2472	0.81	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
1	2412	20.09	20.09	30.00	-9.91
6	2437	20.28	20.28	30.00	-9.72
11	2462	20.21	20.21	30.00	-9.79
12	2467	19.26	19.26	30.00	-10.74
13	2472	18.11	18.11	30.00	-11.89

9.1.5. PSD

LIMITS

FCC §15.247

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

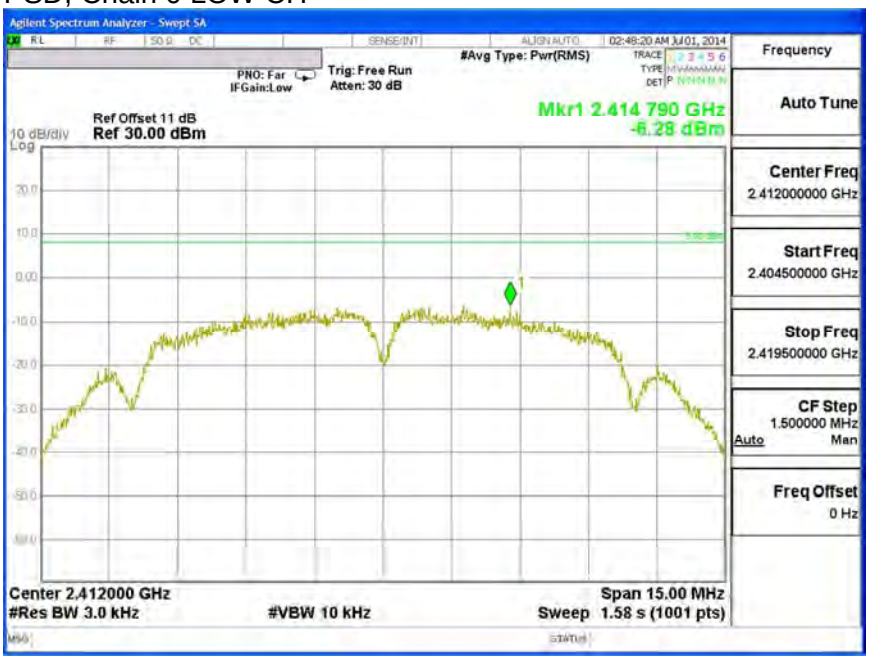
RESULTS

PSD Results

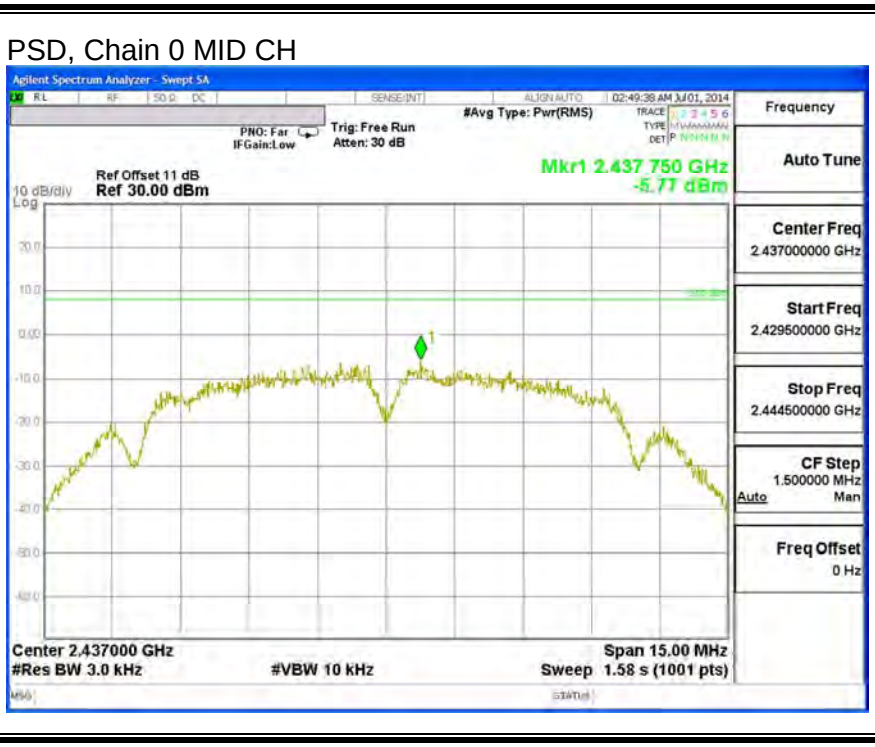
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
1	2412	-6.280	8.0	-14.3
6	2437	-5.770	8.0	-13.8
11	2462	-6.740	8.0	-14.7
12	2467	-8.170	8.0	-16.2
13	2472	-8.180	8.0	-16.2

PSD, Chain 0

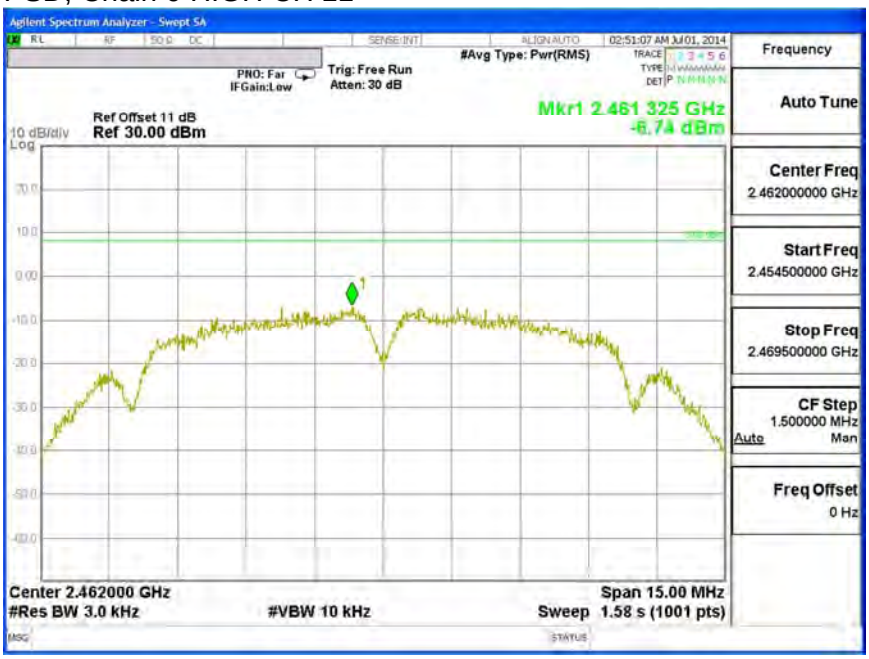
PSD, Chain 0 LOW CH



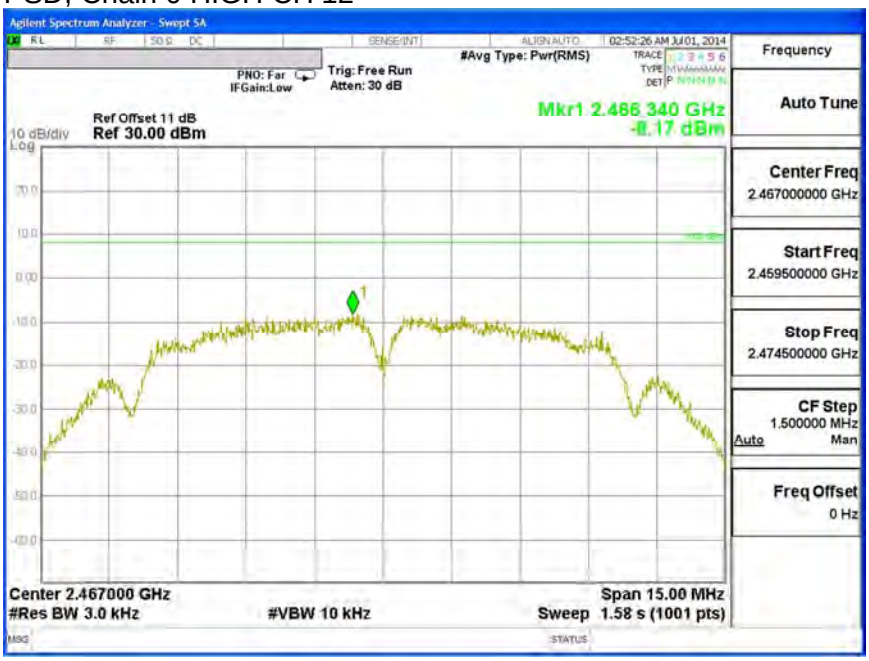
PSD, Chain 0 MID CH



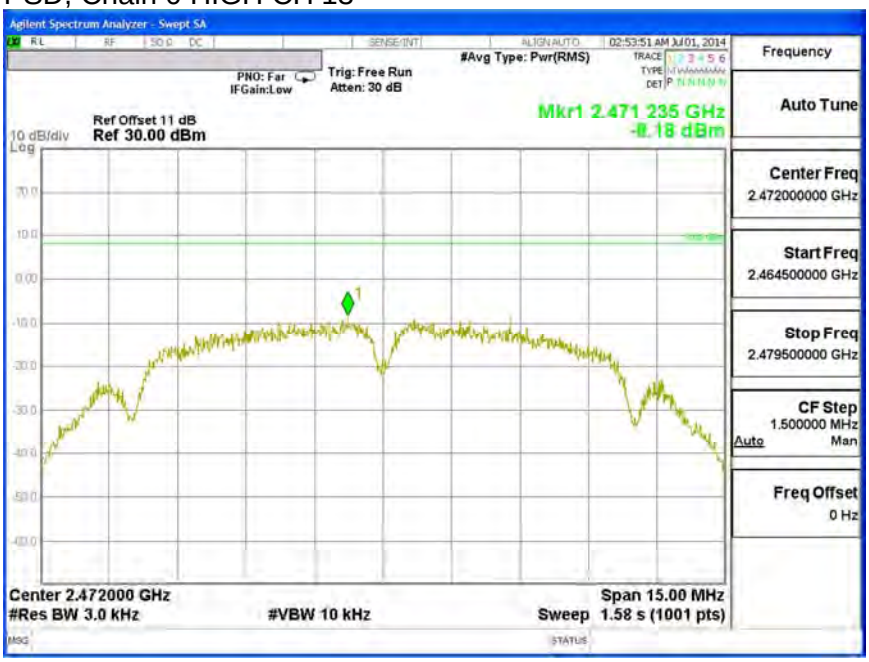
PSD, Chain 0 HIGH CH 11



PSD, Chain 0 HIGH CH 12



PSD, Chain 0 HIGH CH 13



9.1.6. OUT-OF-BAND EMISSIONS

LIMITS

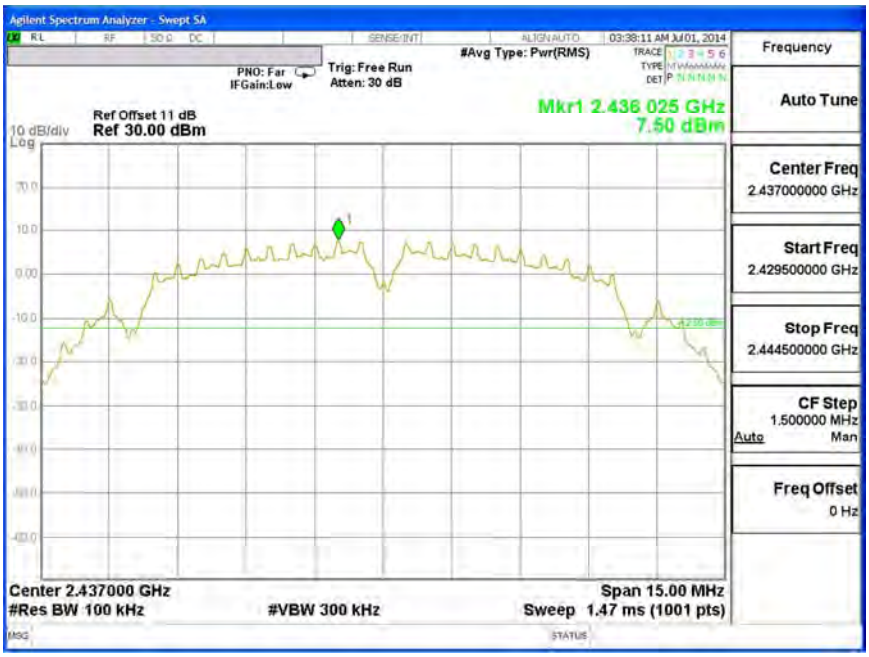
FCC §15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

RESULTS

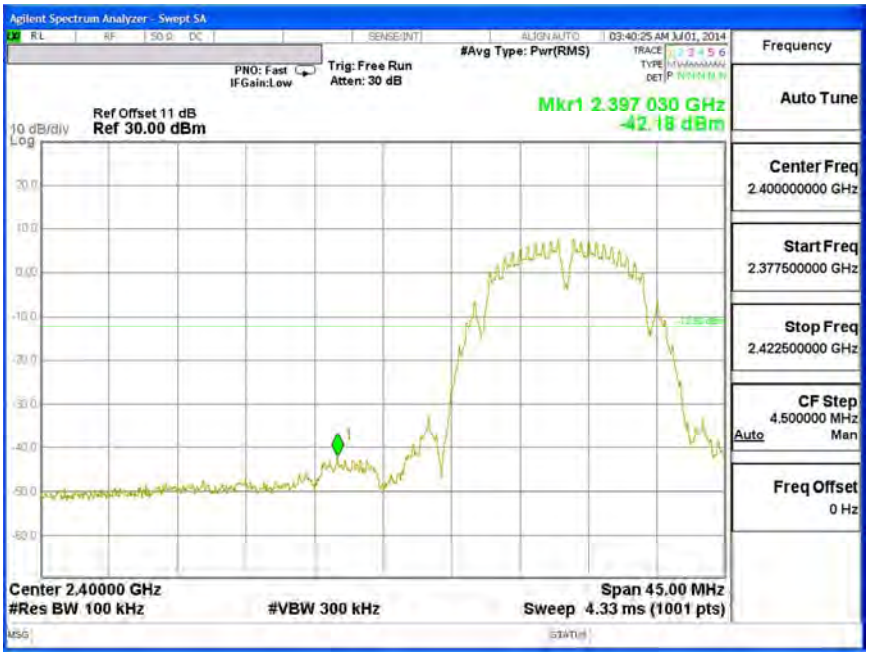
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH 6



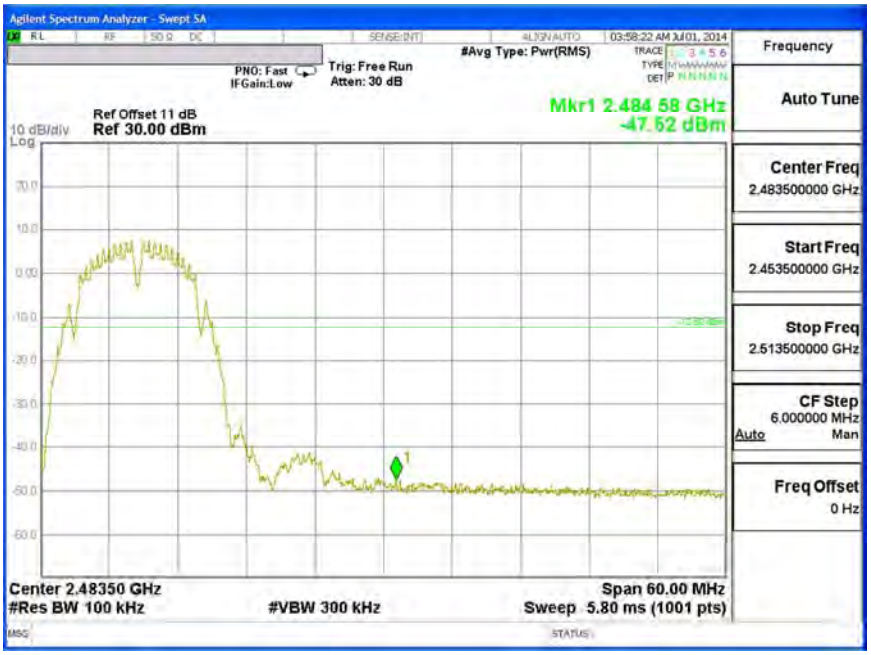
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH 1

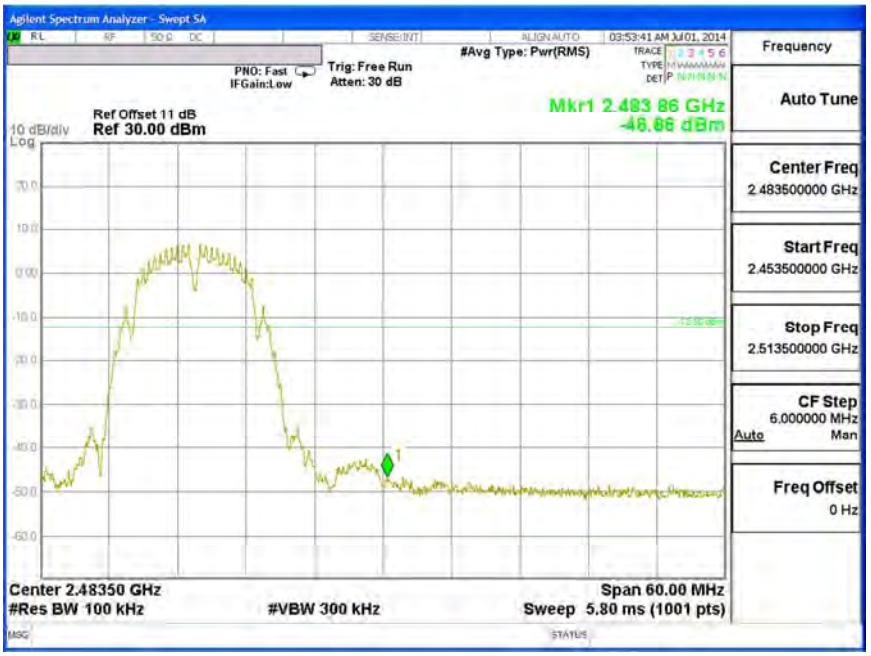


HIGH CHANNEL BANDEDGE

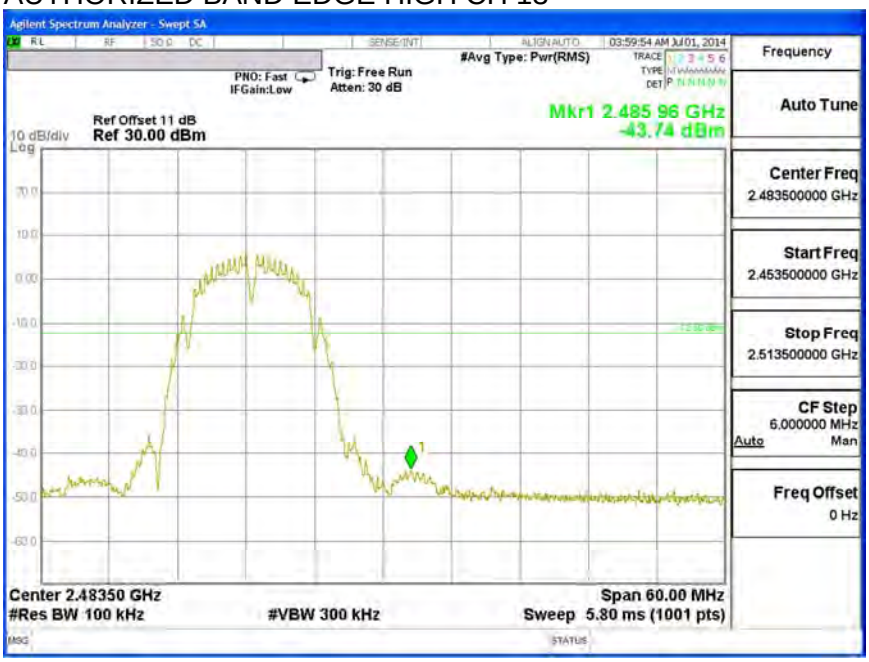
AUTHORIZED BAND EDGE HIGH CH 11



AUTHORIZED BAND EDGE HIGH CH 12

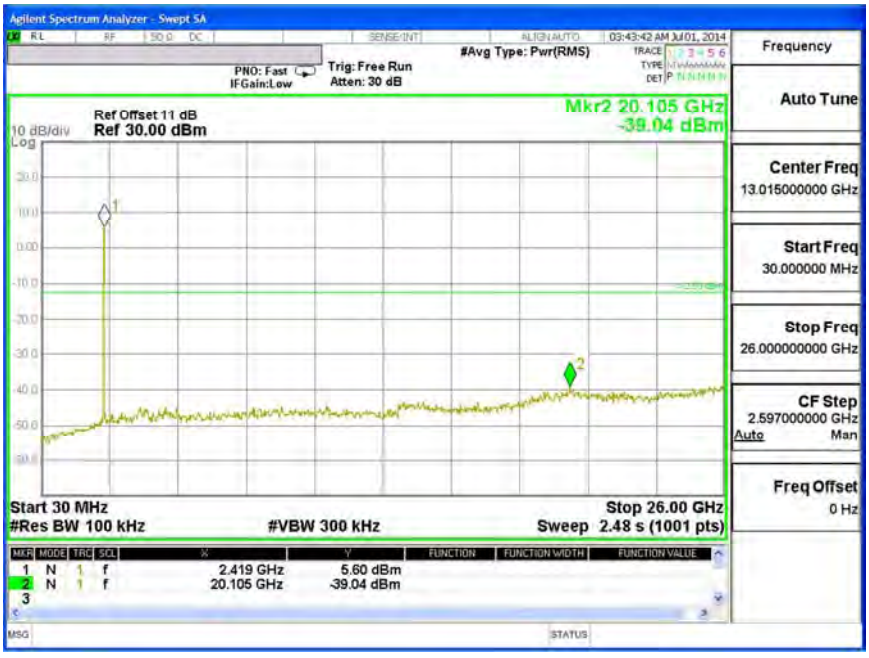


AUTHORIZED BAND EDGE HIGH CH 13

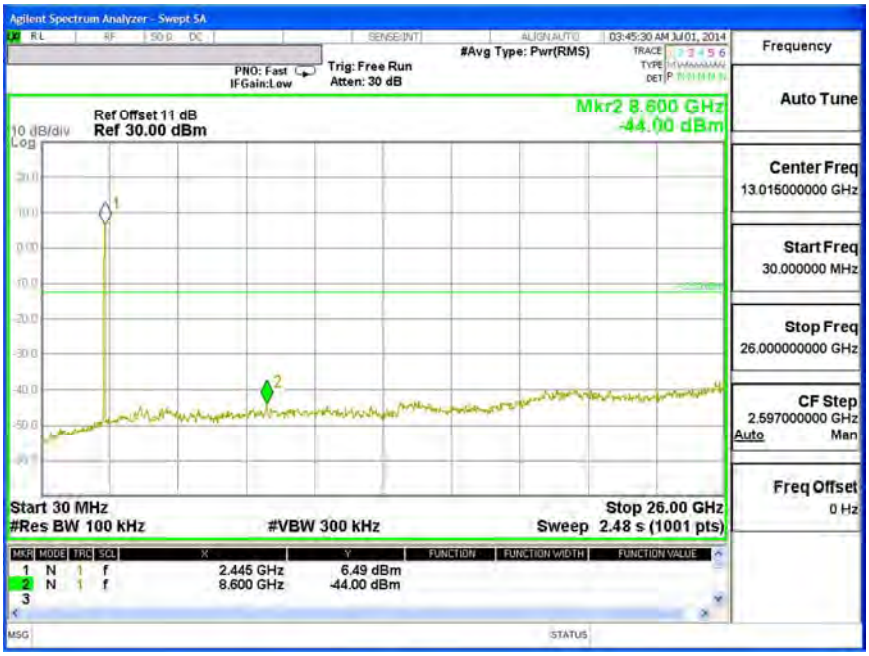


OUT-OF-BAND EMISSIONS

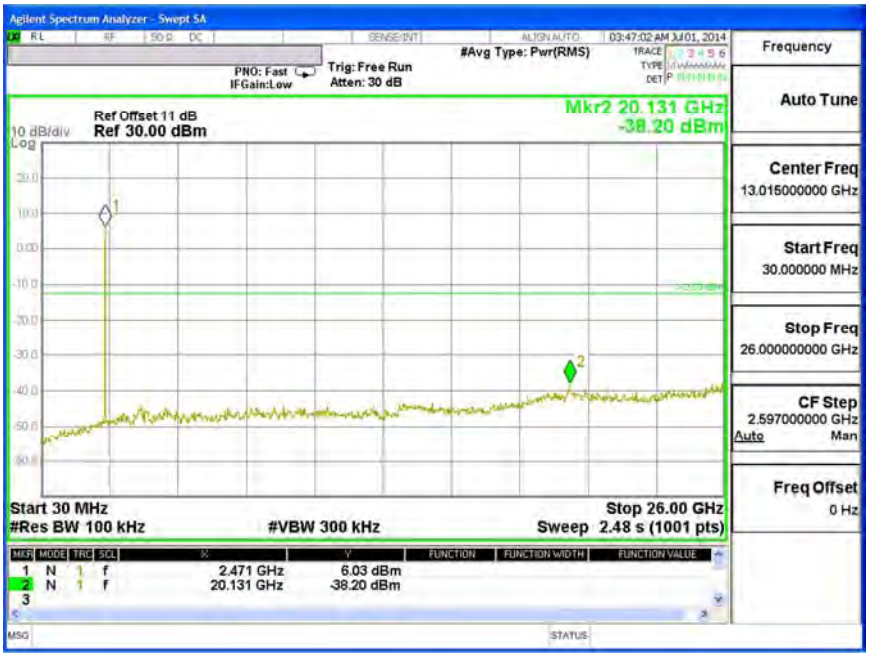
OUT OF BAND LOW CH 1



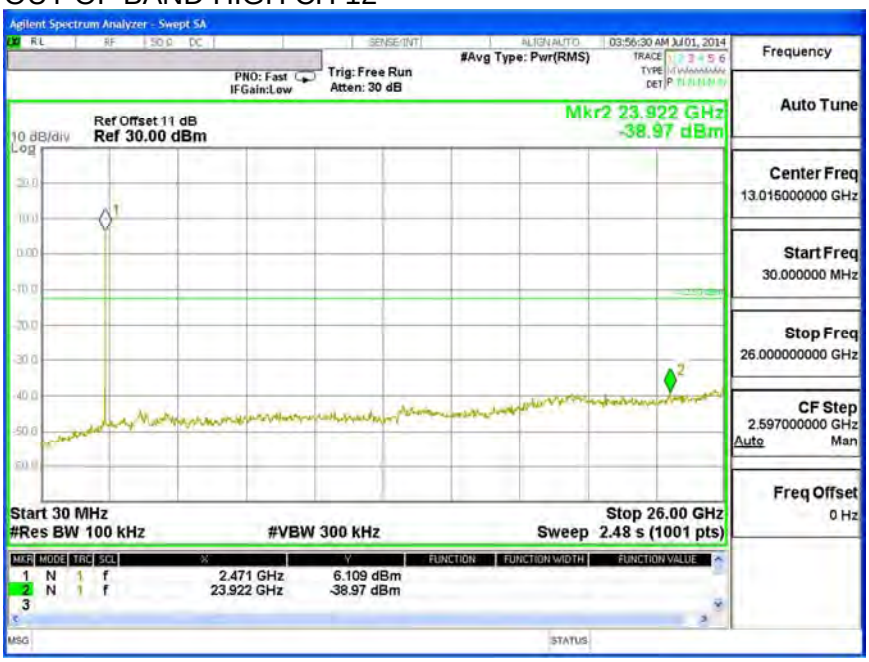
OUT OF BAND MID CH 6



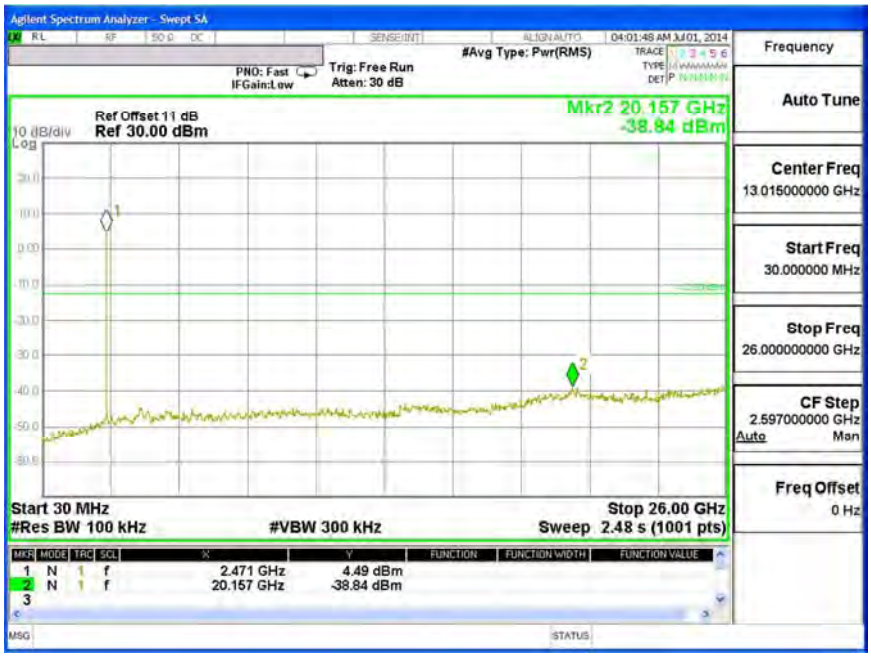
OUT OF BAND HIGH CH 11



OUT OF BAND HIGH CH 12



OUT OF BAND HIGH CH 13



9.2.802.11g 1Tx MODE IN THE 2.4 GHz BAND

9.2.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
1	2412	15.500	0.5
6	2437	15.475	0.5
11	2462	15.300	0.5
12	2467	15.350	0.5
13	2472	15.350	0.5

6 dB BANDWIDTH

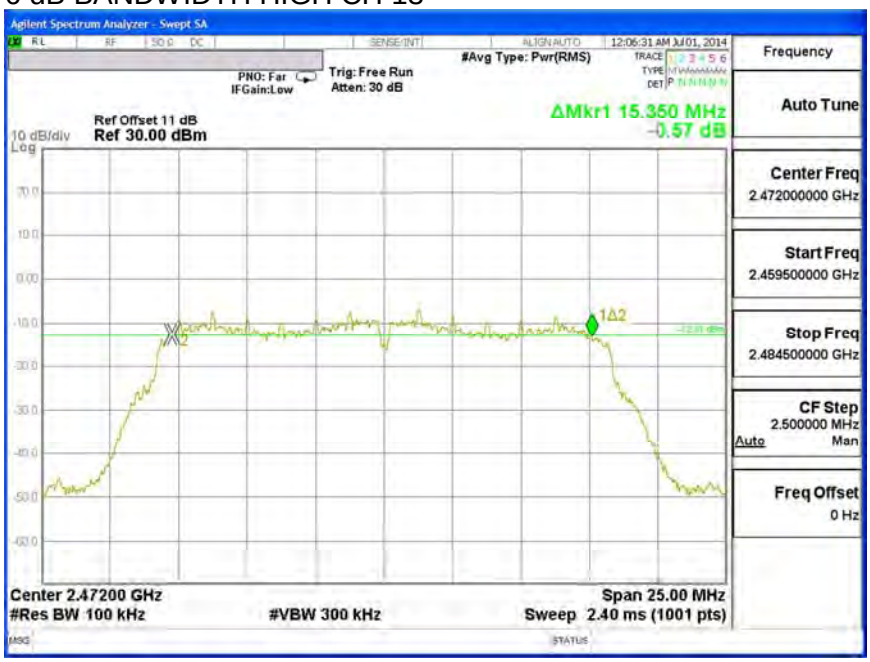
6 dB BANDWIDTH LOW CH 1

6 dB BANDWIDTH MID CH 6

6 dB BANDWIDTH HIGH CH 11

6 dB BANDWIDTH HIGH CH 12

6 dB BANDWIDTH HIGH CH 13



9.2.2. 99% BANDWIDTH

LIMITS

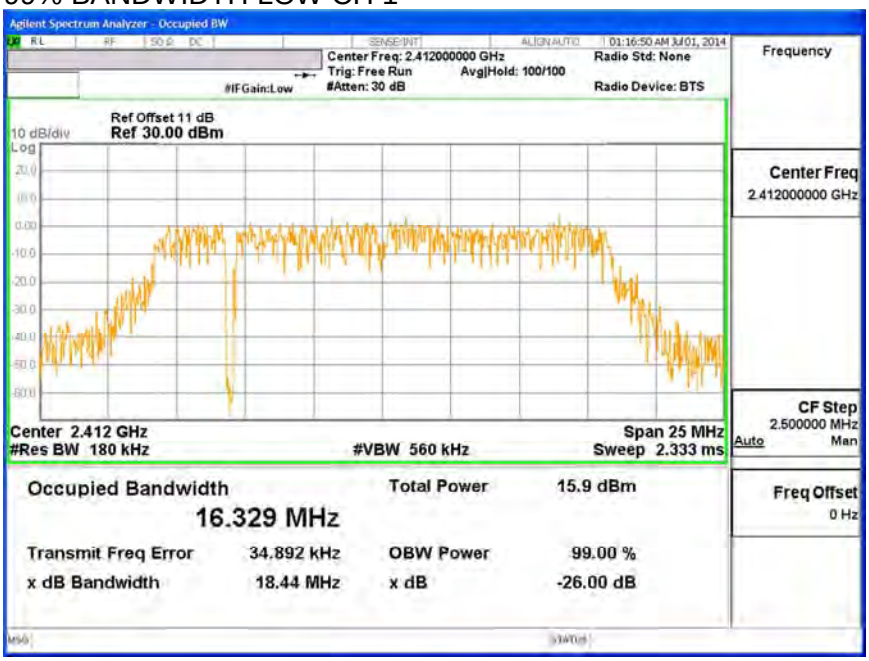
None; for reporting purposes only.

RESULTS

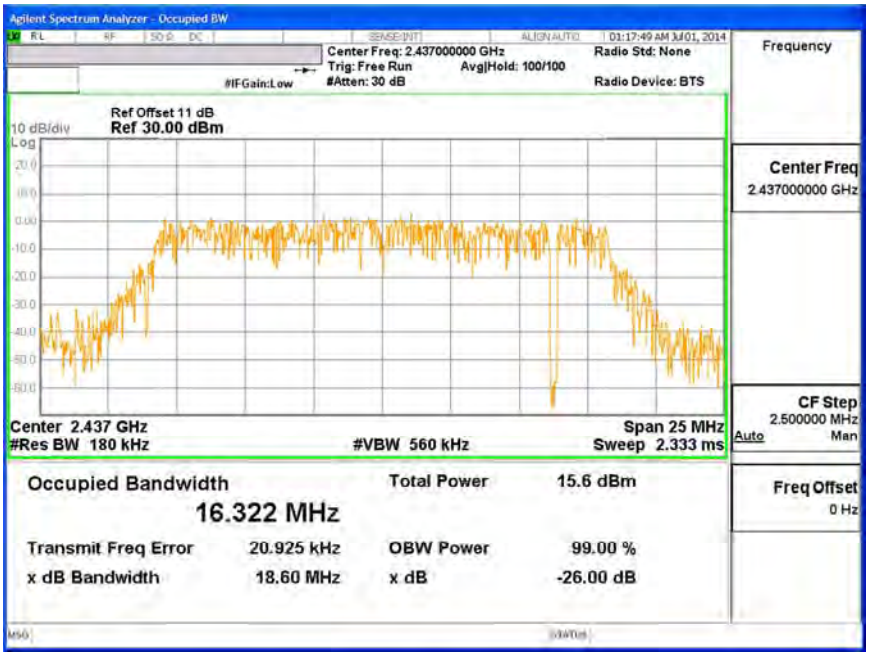
Channel	Frequency (MHz)	99% Bandwidth (MHz)
1	2412	16.329
6	2437	16.322
11	2462	16.410
12	2467	16.331
13	2472	16.356

99% BANDWIDTH

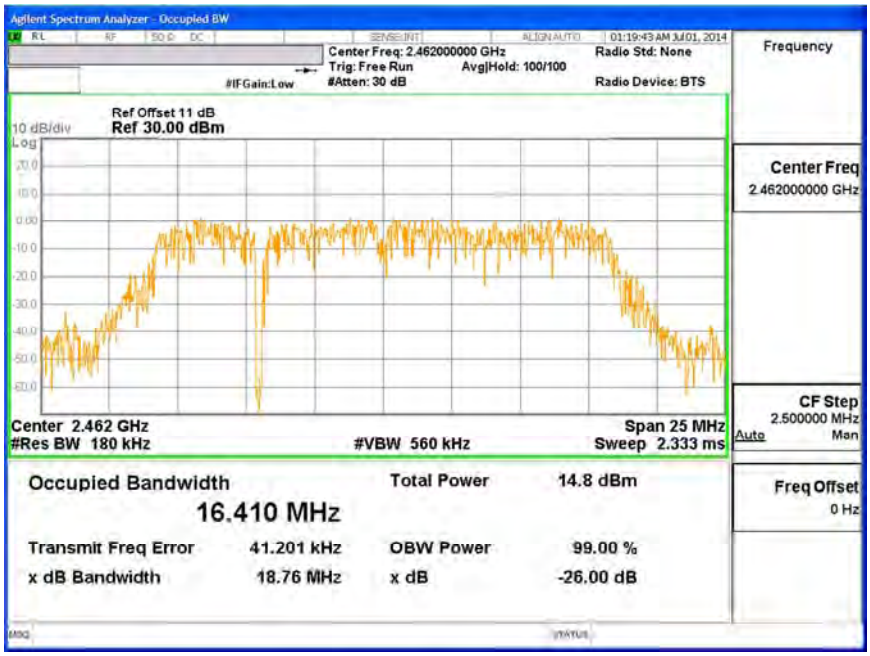
99% BANDWIDTH LOW CH 1



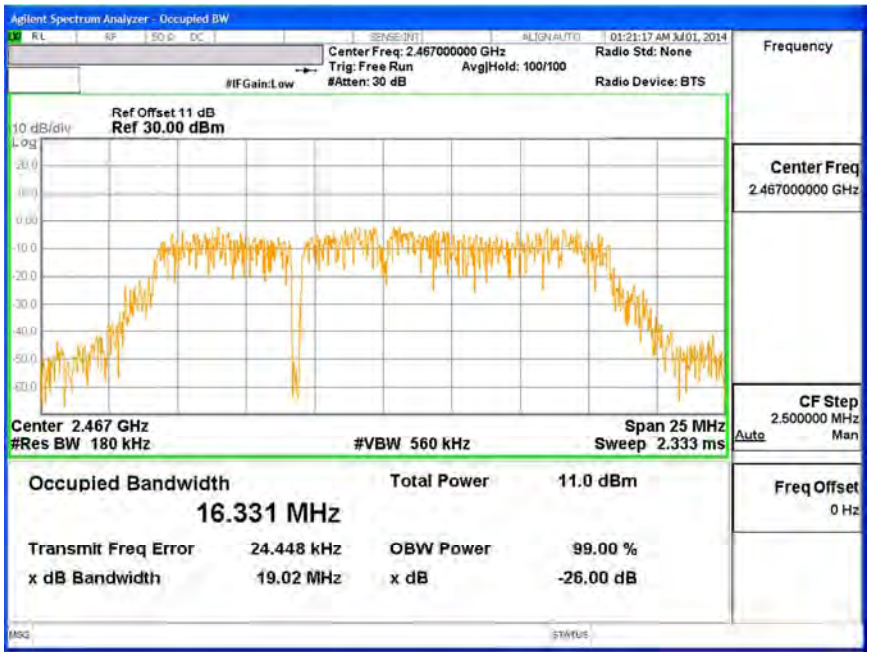
99% BANDWIDTH MID CH 6



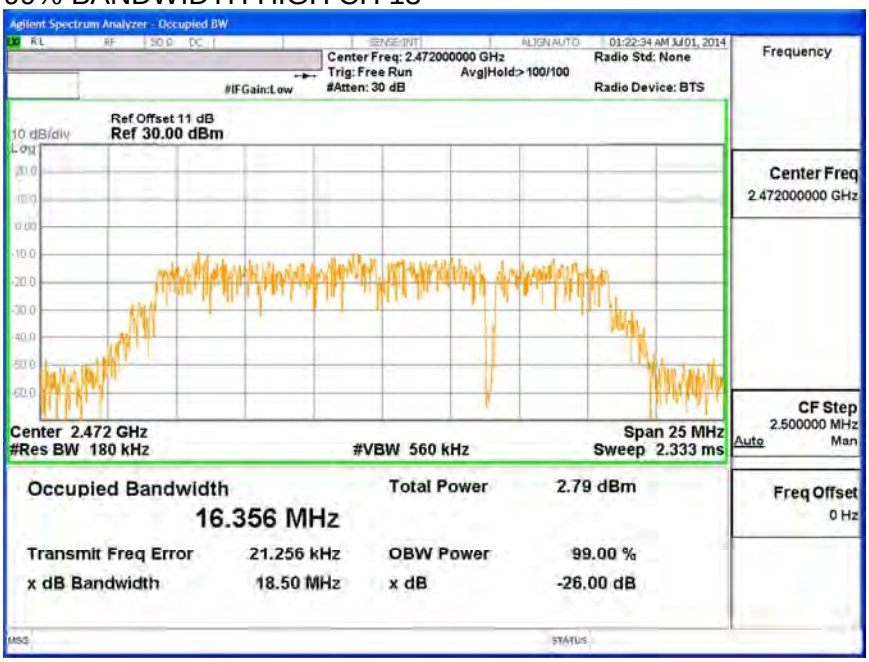
99% BANDWIDTH HIGH CH 11



99% BANDWIDTH HIGH CH 12



99% BANDWIDTH HIGH CH 13



9.2.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
1	2412	16.00
6	2437	16.48
11	2462	15.48
12	2467	11.50
13	2472	3.99

9.2.4. OUTPUT POWER

LIMITS

FCC §15.247

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	0.81	30.00	30	36	30.00
6	2437	0.81	30.00	30	36	30.00
11	2462	0.81	30.00	30	36	30.00
12	2467	0.81	30.00	30	36	30.00
13	2472	0.81	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
1	2412	24.86	24.86	30.00	-5.14
6	2437	24.87	24.87	30.00	-5.13
11	2462	24.36	24.36	30.00	-5.64
12	2467	20.93	20.93	30.00	-9.07
13	2472	13.61	13.61	30.00	-16.39

9.2.5. PSD

LIMITS

FCC §15.247

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

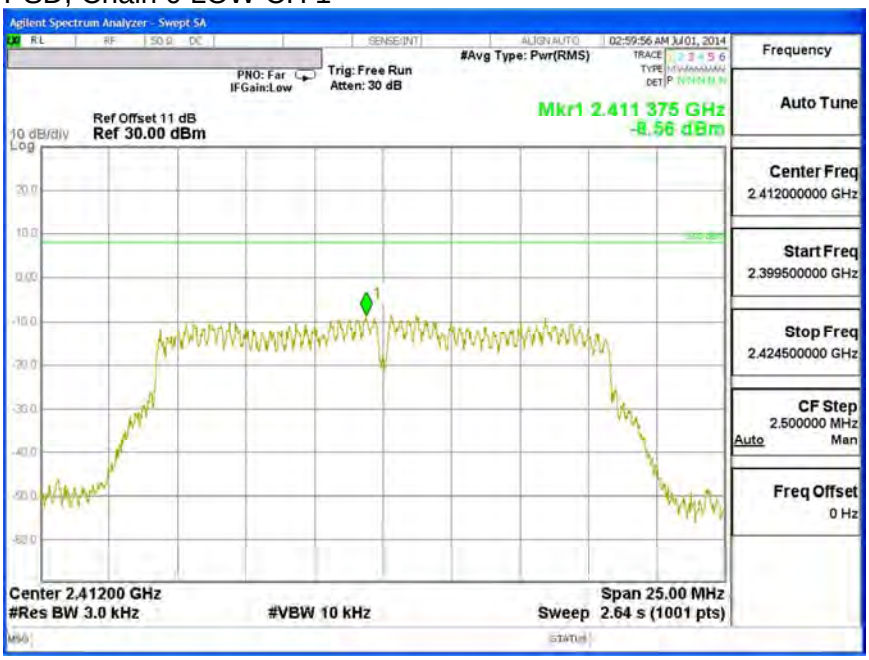
RESULTS

PSD Results

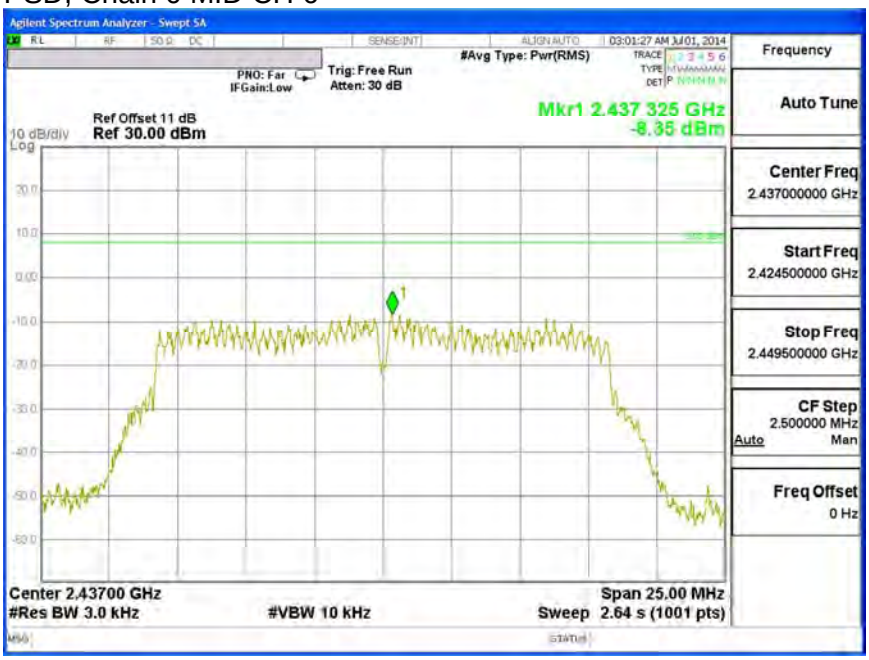
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
1	2412	-8.56	8.0	-16.6
6	2437	-8.35	8.0	-16.4
11	2462	-9.22	8.0	-17.2
12	2467	-13.37	8.0	-21.4
13	2472	-20.92	8.0	-28.9

PSD, Chain 0

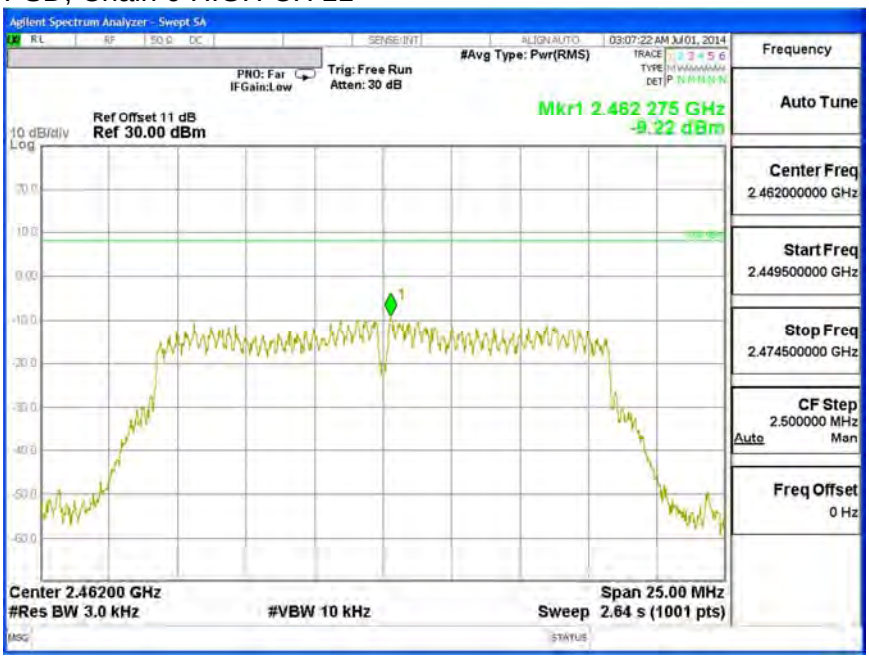
PSD, Chain 0 LOW CH 1



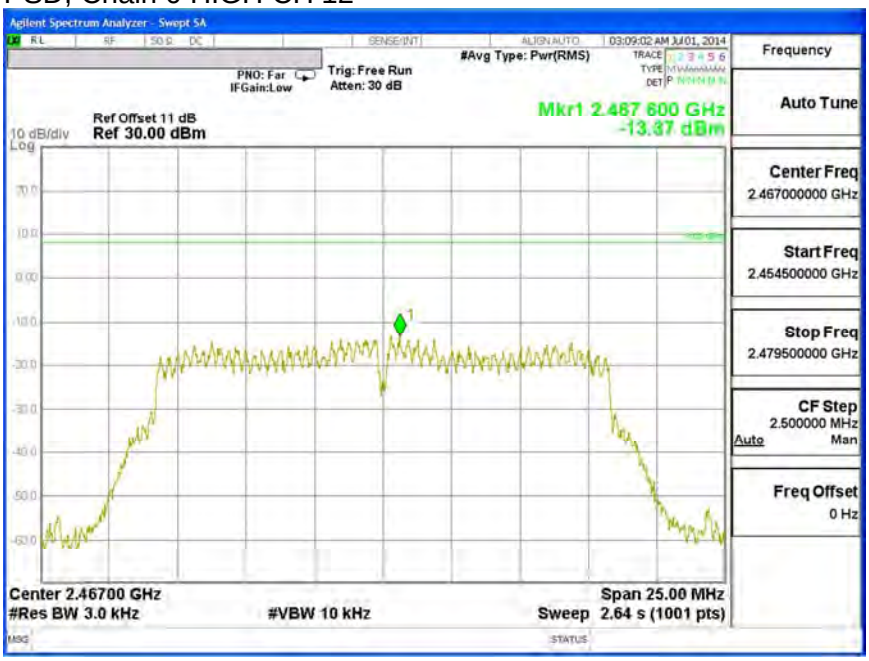
PSD, Chain 0 MID CH 6



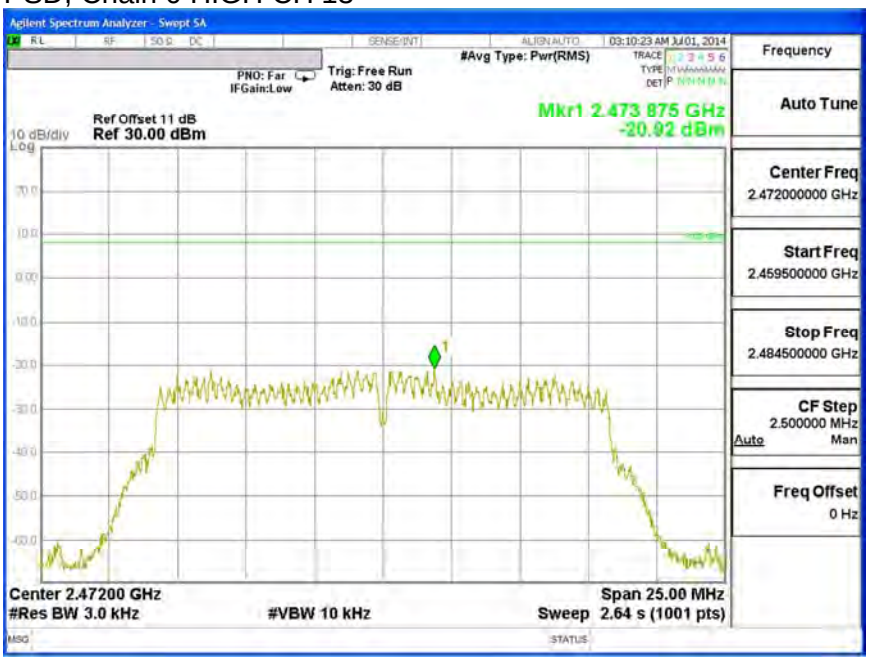
PSD, Chain 0 HIGH CH 11



PSD, Chain 0 HIGH CH 12



PSD, Chain 0 HIGH CH 13



9.2.6. OUT-OF-BAND EMISSIONS

LIMITS

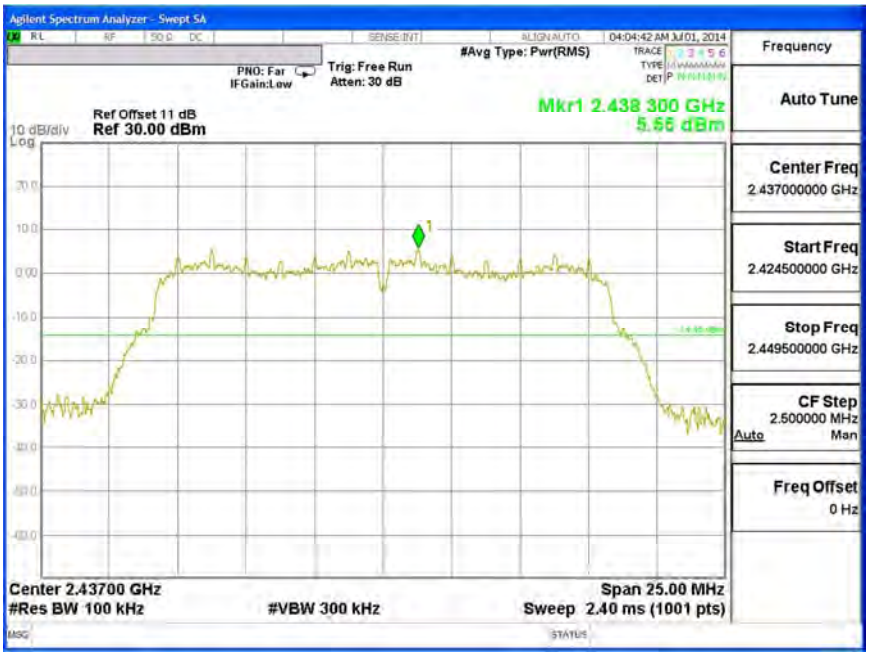
FCC §15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

RESULTS

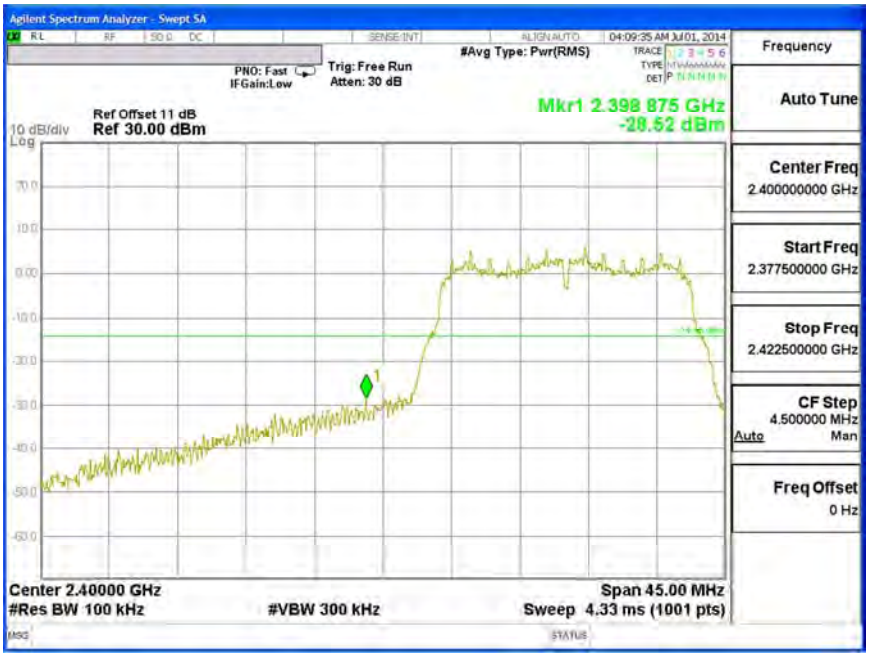
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH 6



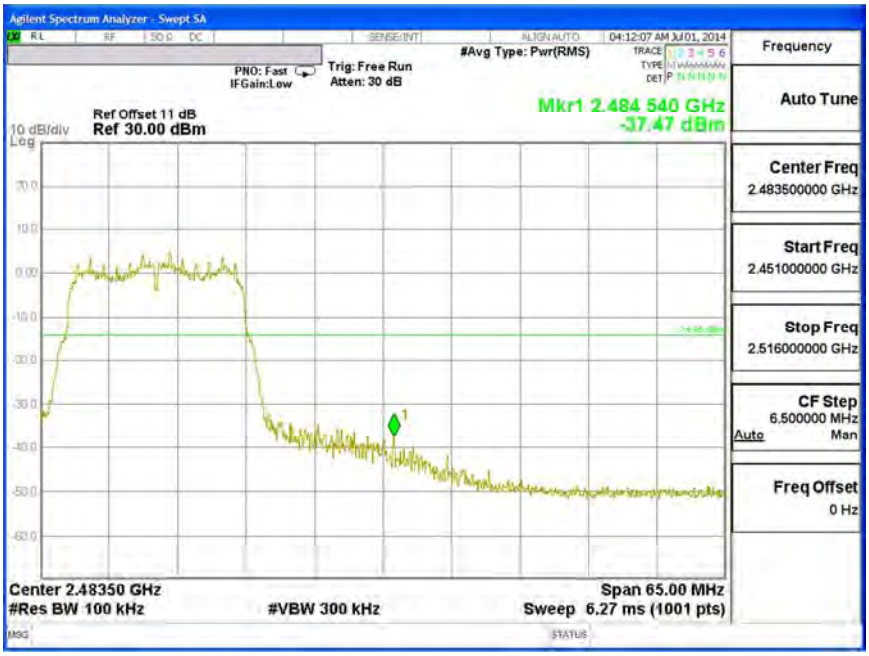
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH 1

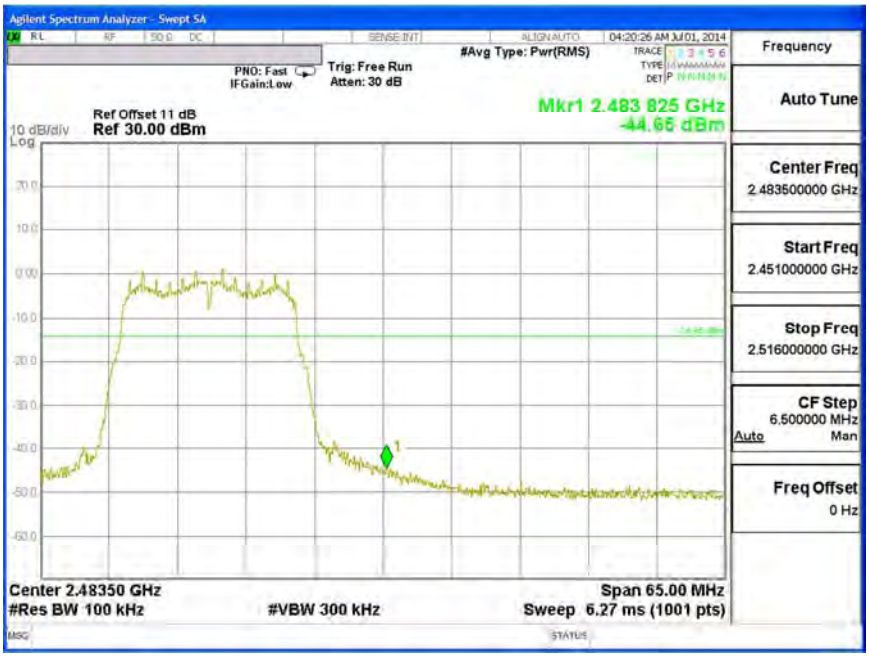


HIGH CHANNEL BANDEDGE

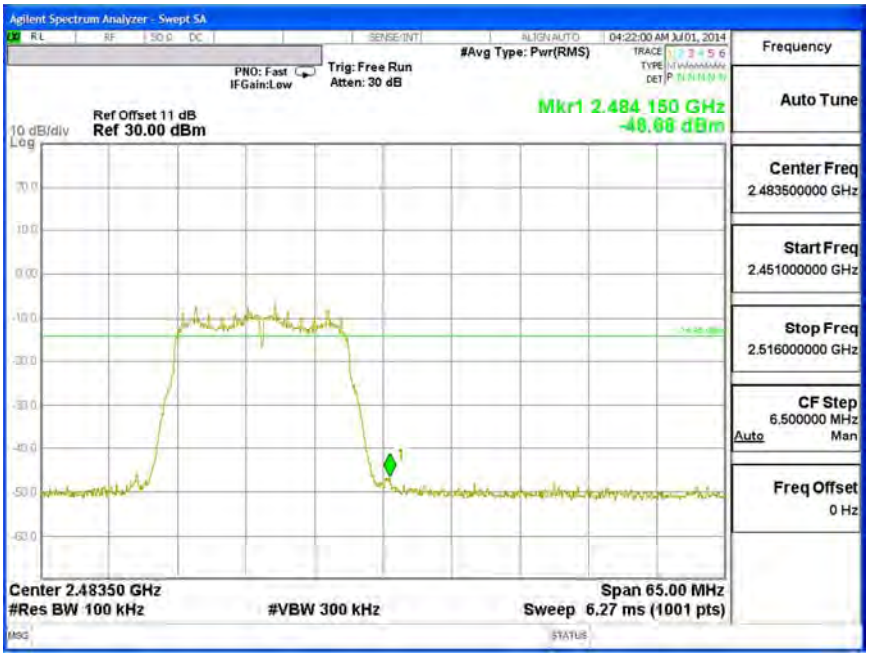
AUTHORIZED BAND EDGE HIGH CH 11



AUTHORIZED BAND EDGE HIGH CH 12

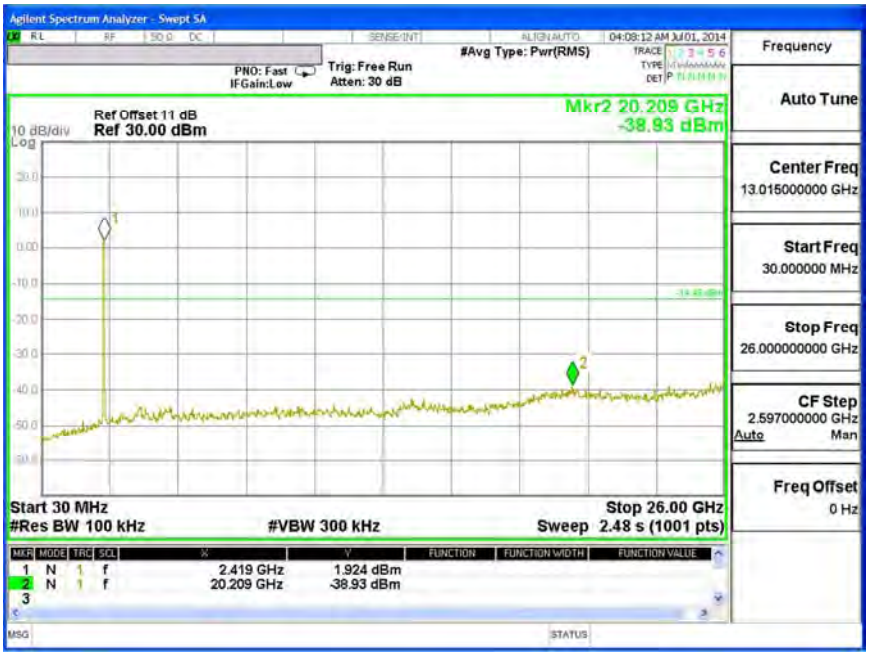


AUTHORIZED BAND EDGE HIGH CH 13

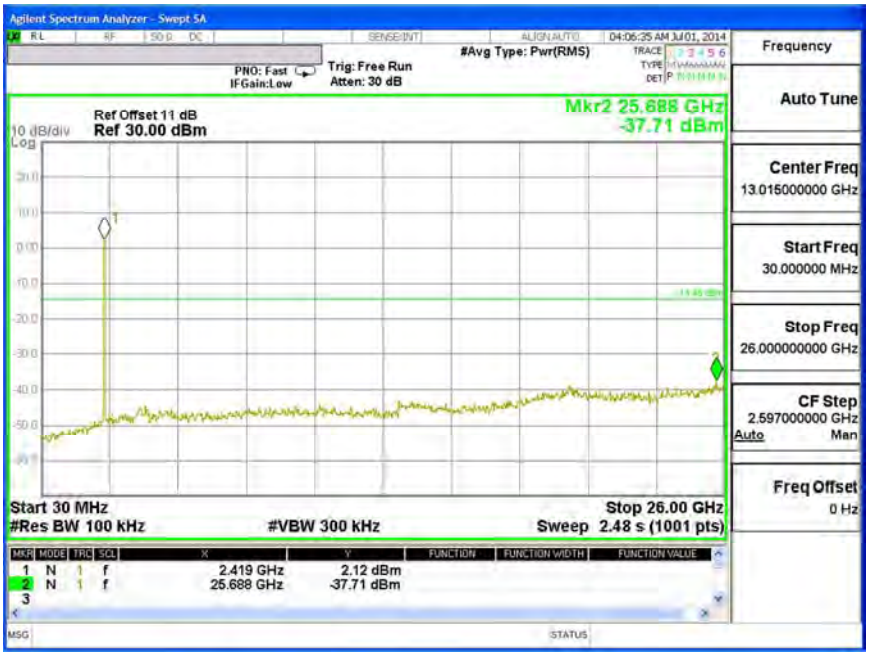


OUT-OF-BAND EMISSIONS

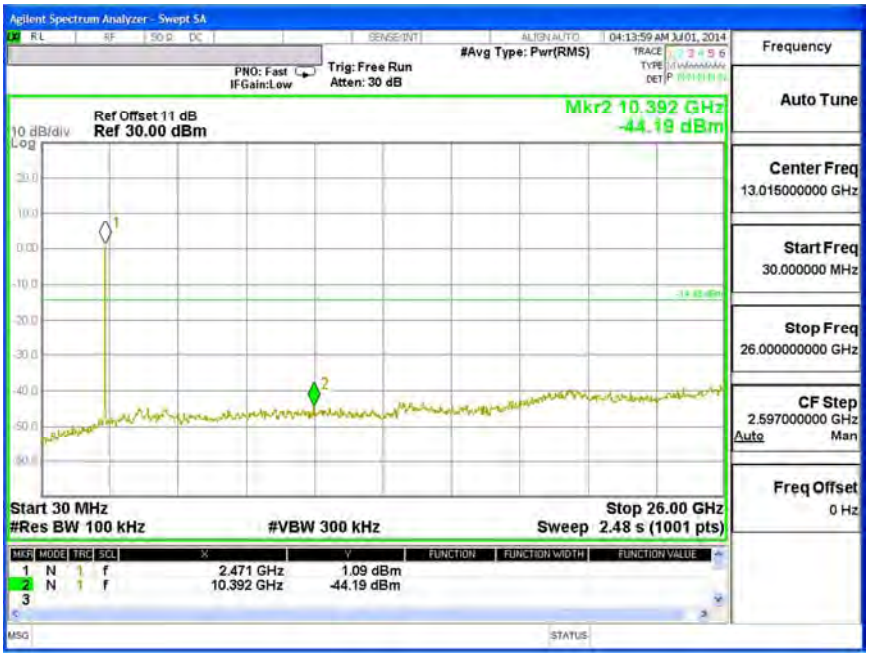
OUT OF BAND LOW CH 1



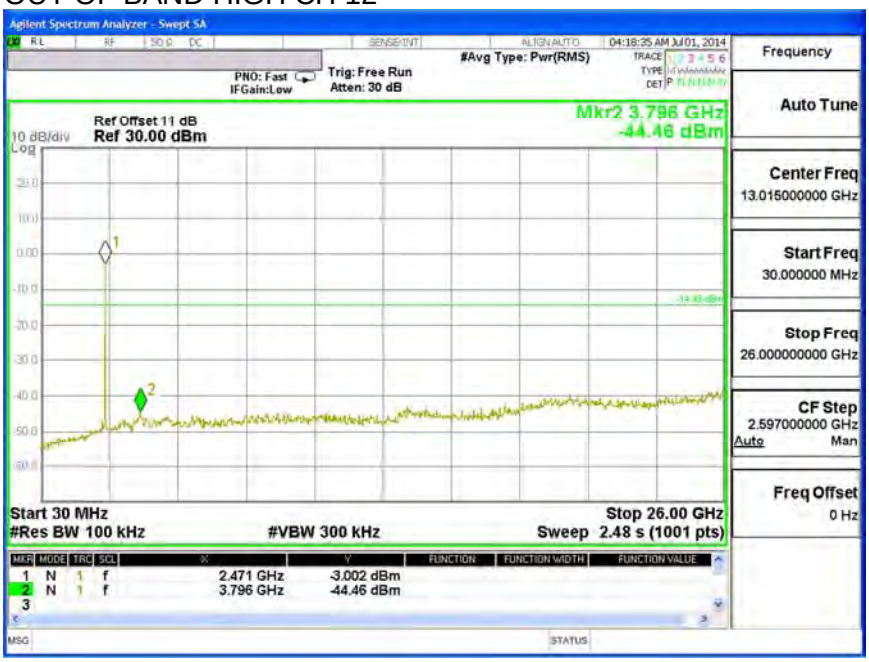
OUT OF BAND MID CH 6



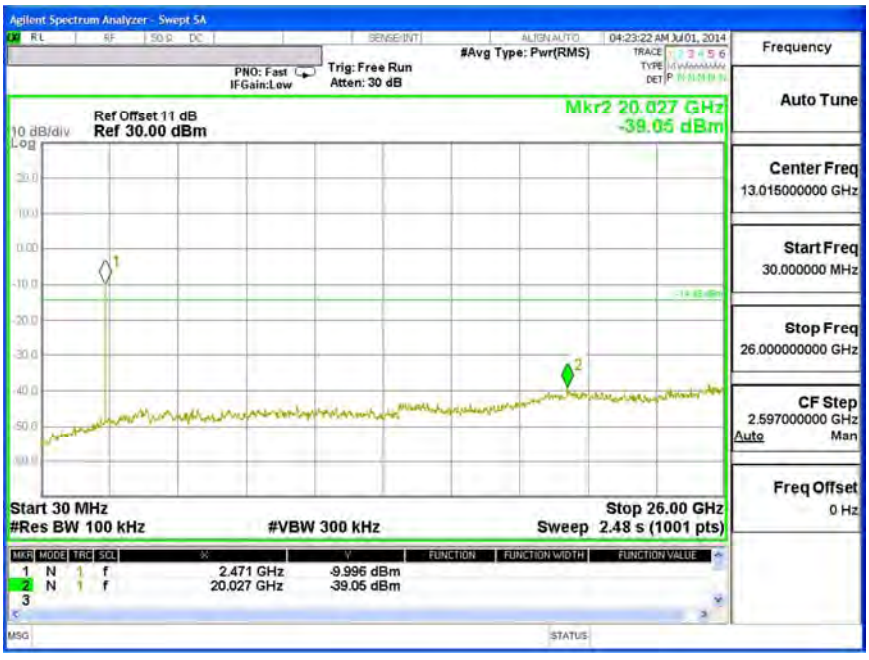
OUT OF BAND HIGH CH 11



OUT OF BAND HIGH CH 12



OUT OF BAND HIGH CH 13



9.3.802.11n HT20 2Tx MODE IN THE 2.4 GHz BAND

9.3.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

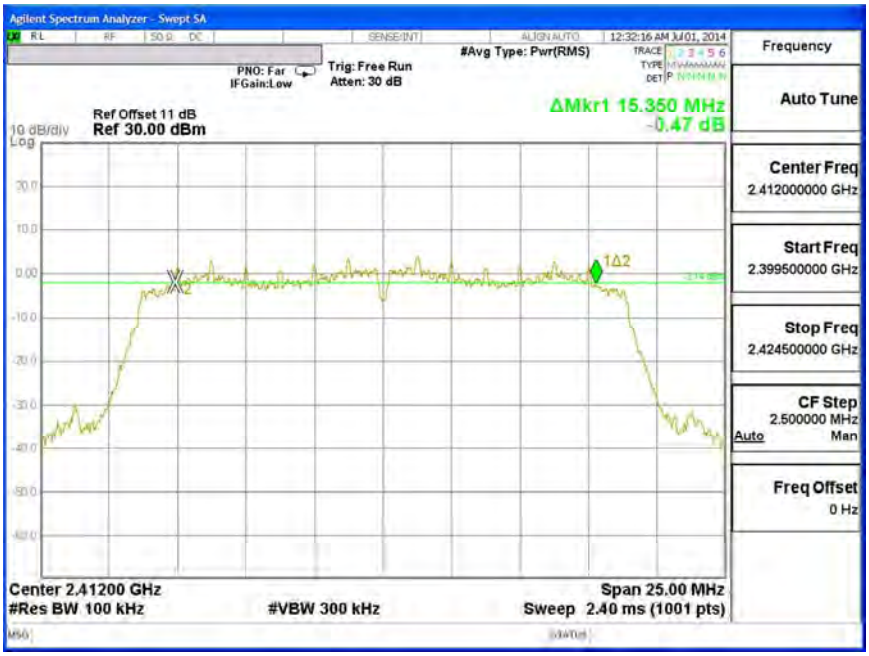
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
1	2412	15.350	16.275	0.5
6	2437	15.750	17.500	0.5
11	2462	15.175	15.725	0.5
12	2467	15.375	16.275	0.5
13	2472	15.175	16.275	0.5

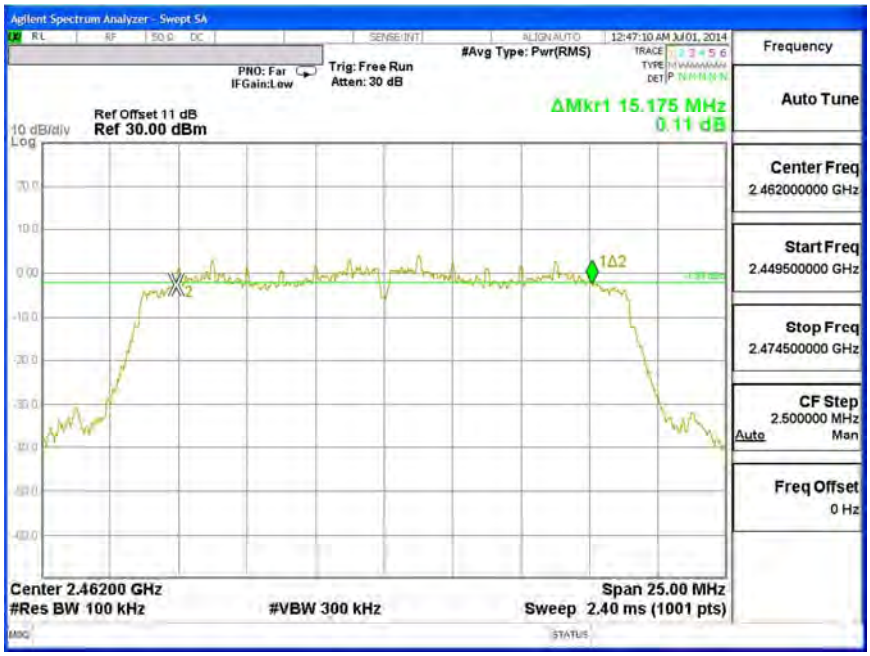
6 dB BANDWIDTH, Chain 0

6 dB BANDWIDTH Chain 0 LOW CH 1

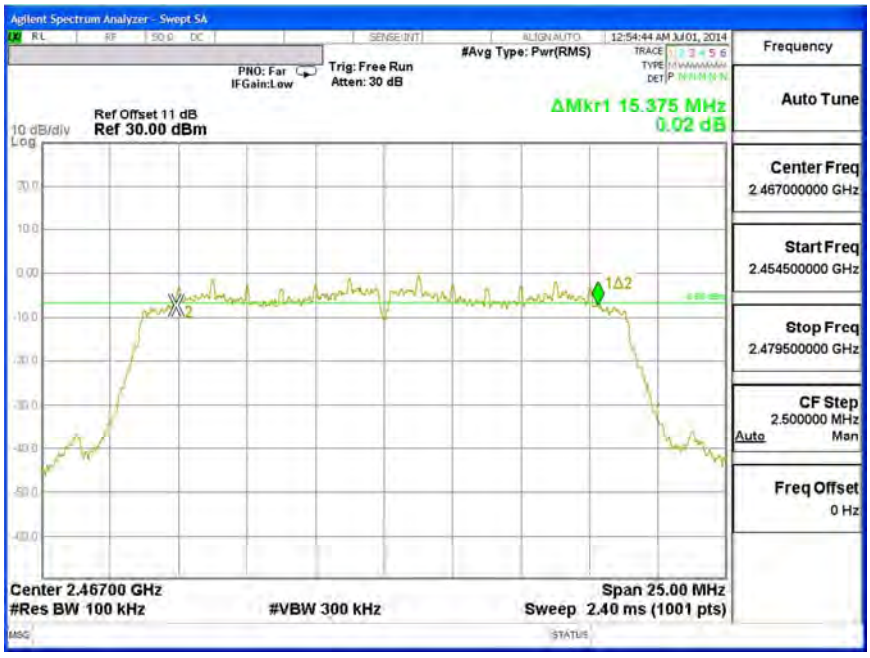


6 dB BANDWIDTH Chain 0 MID CH 6

6 dB BANDWIDTH Chain 0 HIGH CH 11



6 dB BANDWIDTH Chain 0 HIGH CH 12



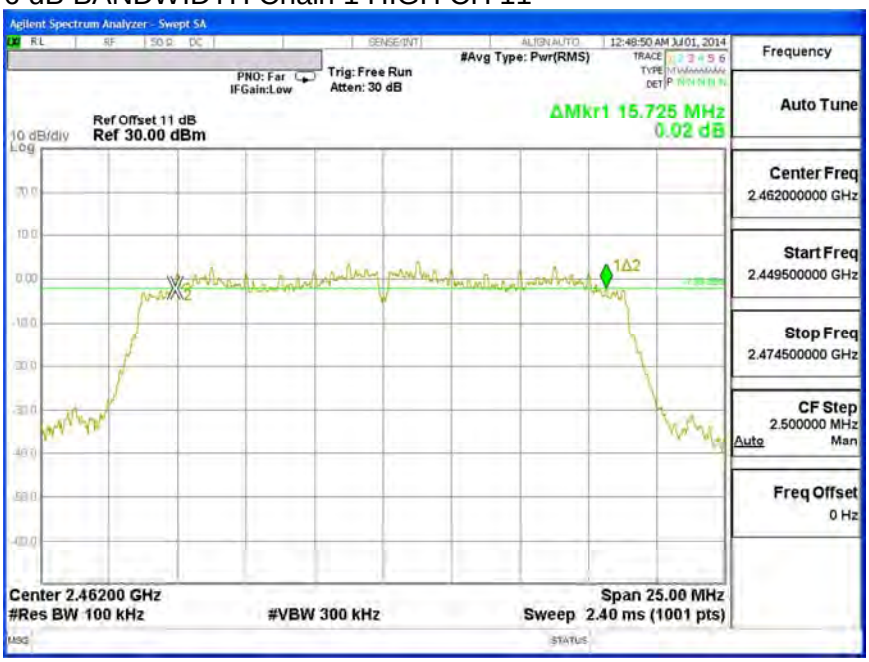
6 dB BANDWIDTH Chain 0 HIGH CH 13

6 dB BANDWIDTH, Chain 1

6 dB BANDWIDTH Chain 1 LOW CH 1

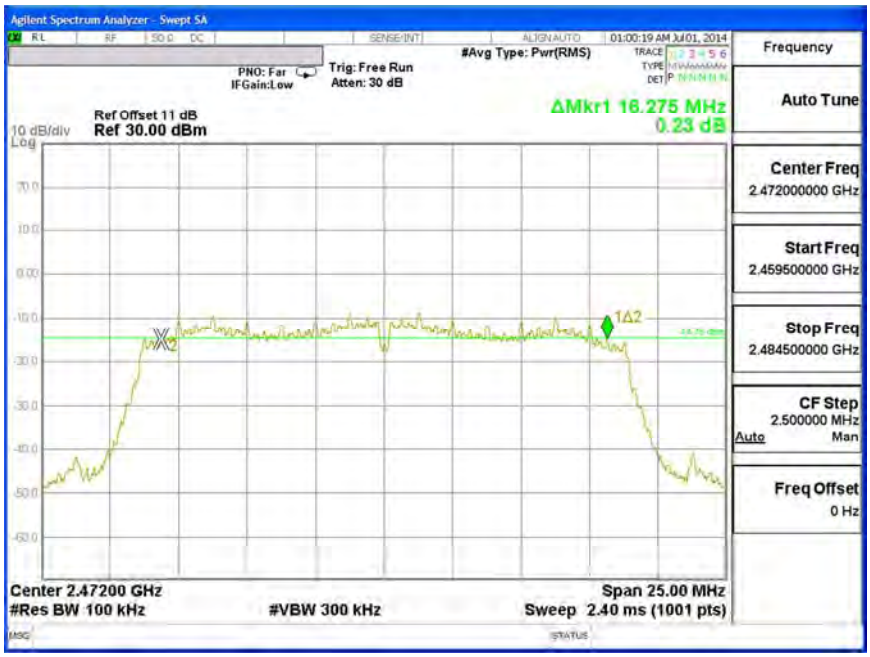
6 dB BANDWIDTH Chain 1 MID CH 6

6 dB BANDWIDTH Chain 1 HIGH CH 11



6 dB BANDWIDTH Chain 1 HIGH CH 12

6 dB BANDWIDTH Chain 1 HIGH CH 13



9.3.2. 99% BANDWIDTH

LIMITS

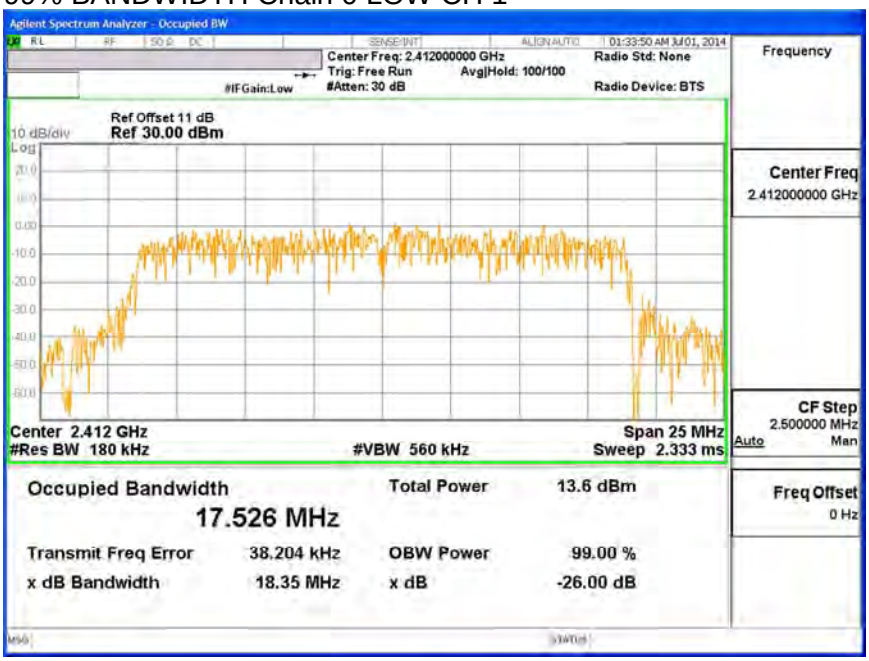
None; for reporting purposes only.

RESULTS

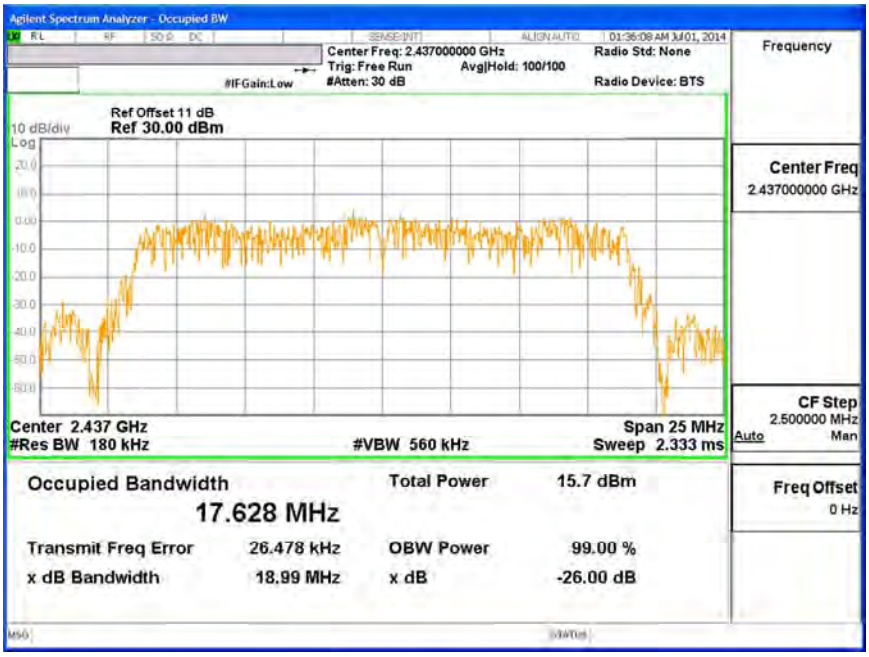
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
1	2412	17.526	17.544
6	2437	17.628	17.617
11	2462	17.603	17.614
12	2467	17.608	17.605
13	2472	17.590	17.579

99% BANDWIDTH, Chain 0

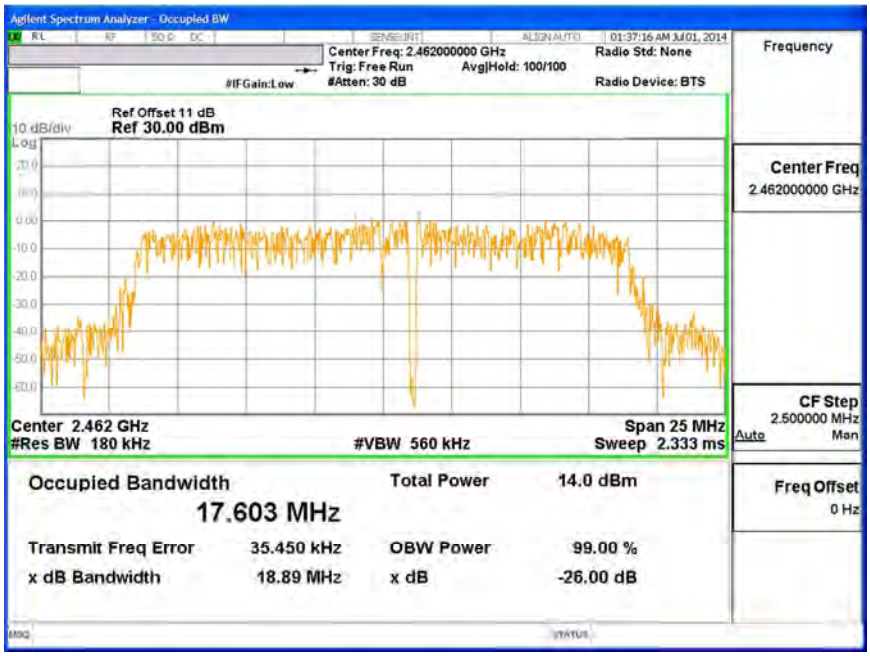
99% BANDWIDTH Chain 0 LOW CH 1



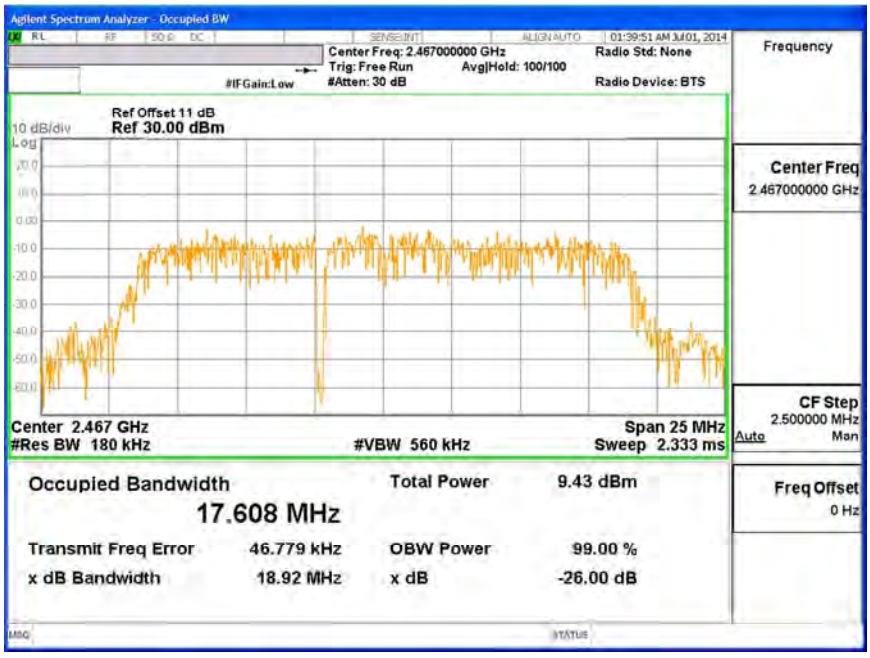
99% BANDWIDTH Chain 0 MID CH 6



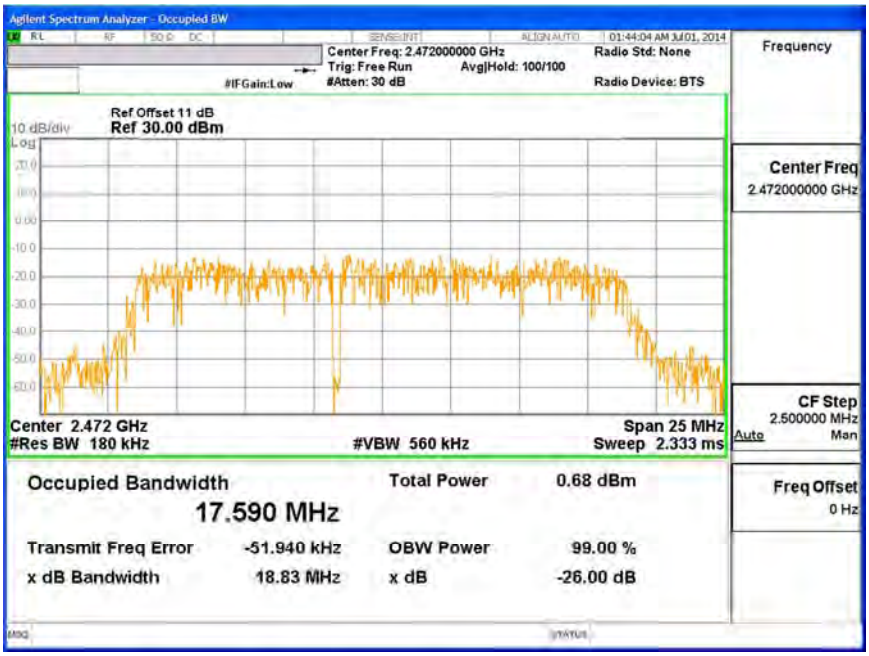
99% BANDWIDTH Chain 0 HIGH CH 11



99% BANDWIDTH Chain 0 LOW CH 12

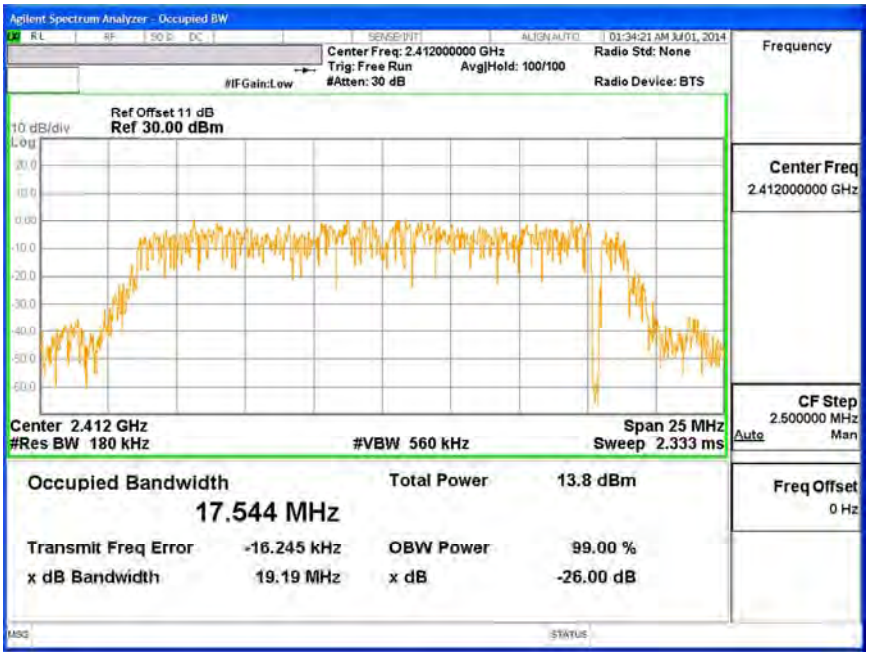


99% BANDWIDTH Chain 0 LOW CH 13

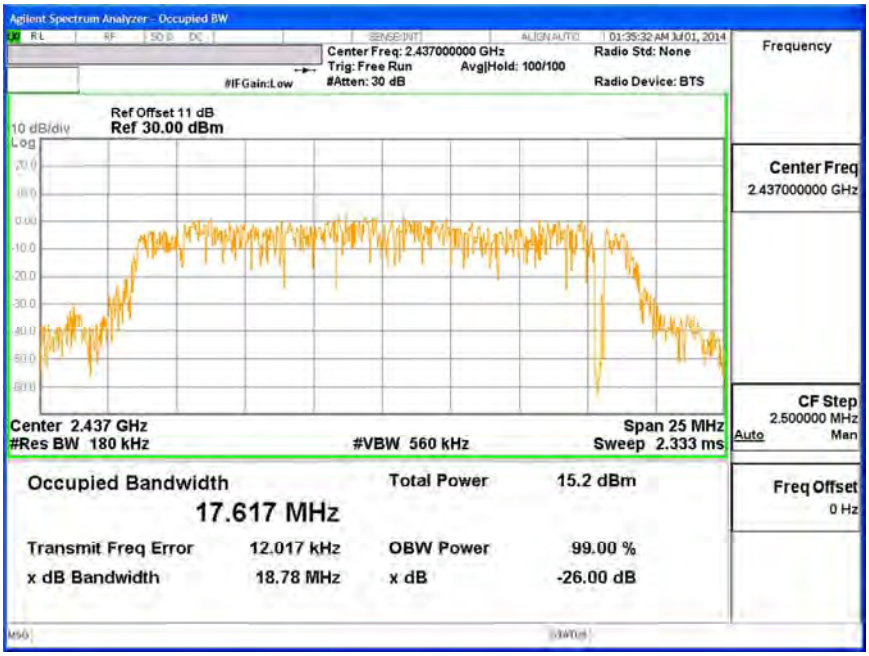


99% BANDWIDTH, Chain 1

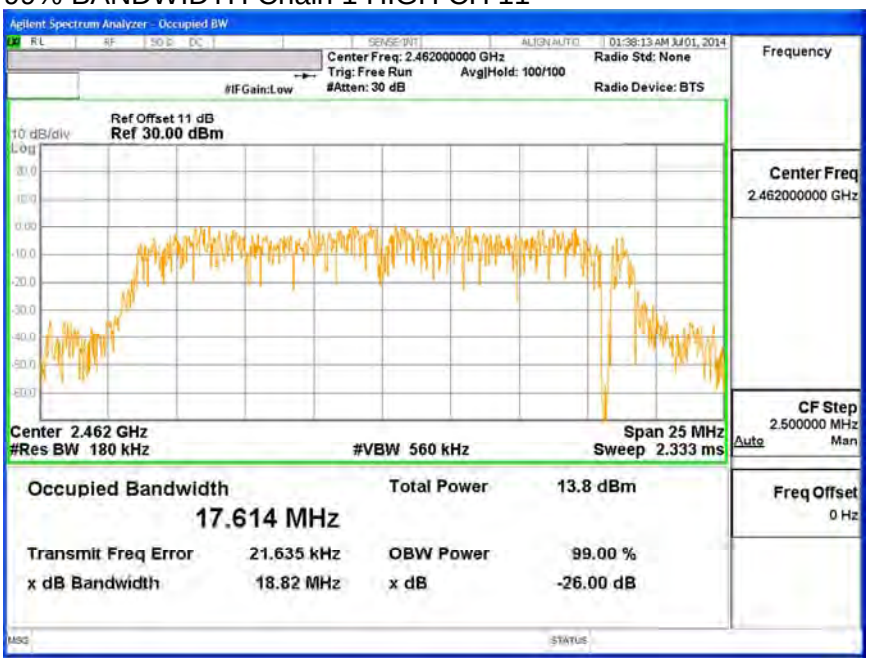
99% BANDWIDTH Chain 1 LOW CH 1



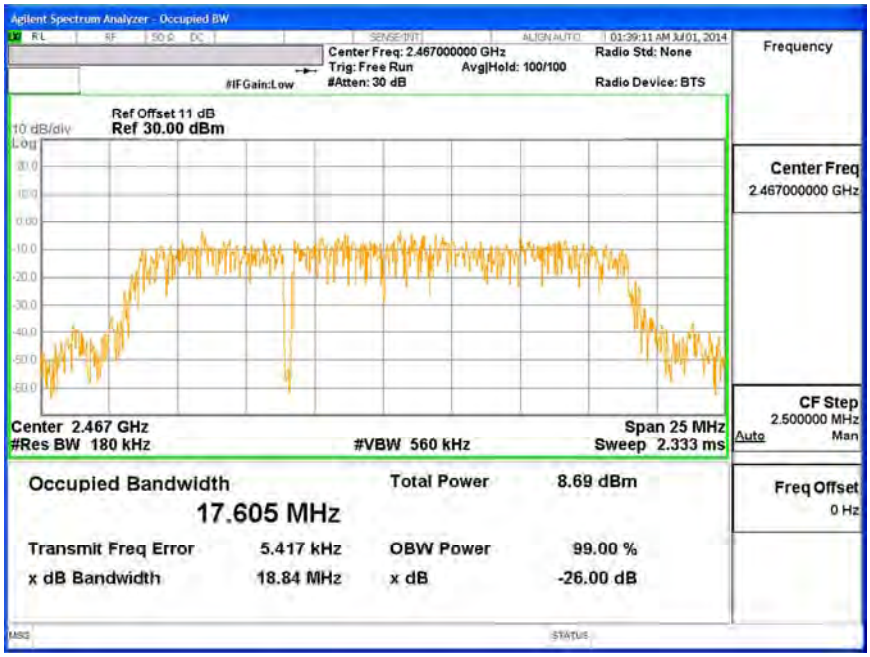
99% BANDWIDTH Chain 1 MID CH 6



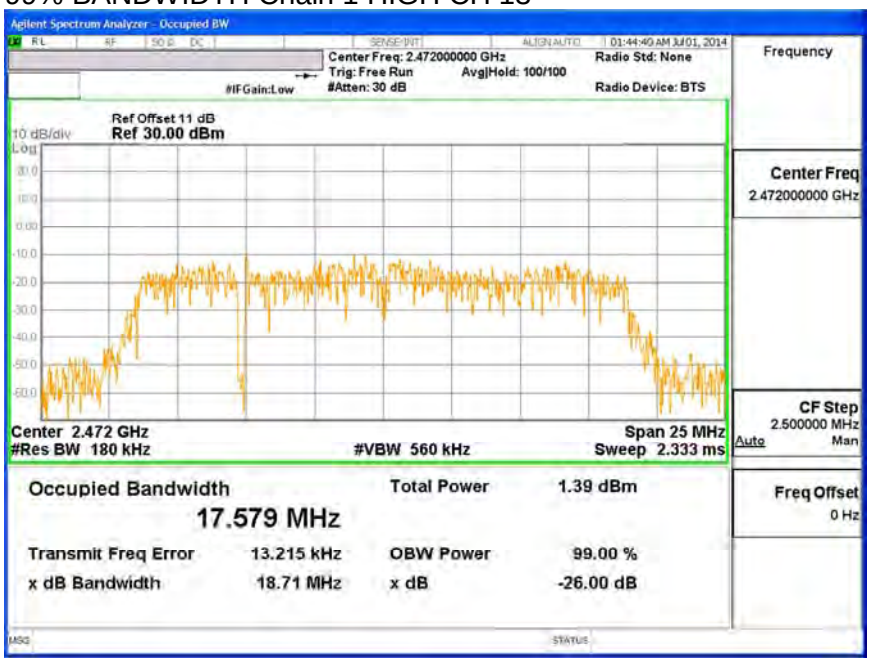
99% BANDWIDTH Chain 1 HIGH CH 11



99% BANDWIDTH Chain 1 HIGH CH 12



99% BANDWIDTH Chain 1 HIGH CH 13



9.3.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
1	2412	14.50	14.48	17.50
6	2437	16.48	16.50	19.50
11	2462	14.49	14.50	17.51
12	2467	9.50	9.48	12.50
13	2472	2.00	1.96	4.99

9.3.4. OUTPUT POWER

LIMITS

FCC §15.247

For systems using digital modulation in the 2400–2483.5 MHz band: 1 Watt, based on the use of antennas with directional gains that do not exceed 6dBi. If transmitting antennas of directional gain greater than 6dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

DIRECTIONAL ANTENNA GAIN

The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

Use this table for correlated chains and unequal antenna gain

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
0.81	-1.86	2.59

.

RESULTS

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	2.59	30.00	30	36	30.00
6	2437	2.59	30.00	30	36	30.00
11	2462	2.59	30.00	30	36	30.00
12	2467	2.59	30.00	30	36	30.00
13	2472	2.59	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
1	2412	23.58	23.85	26.73	30.00	-3.27
6	2437	24.75	24.54	27.66	30.00	-2.34
11	2462	23.72	23.79	26.77	30.00	-3.23
12	2467	18.34	19.03	21.71	30.00	-8.29
13	2472	11.25	11.38	14.33	30.00	-15.67

9.3.5. PSD

LIMITS

FCC §15.247 (e)

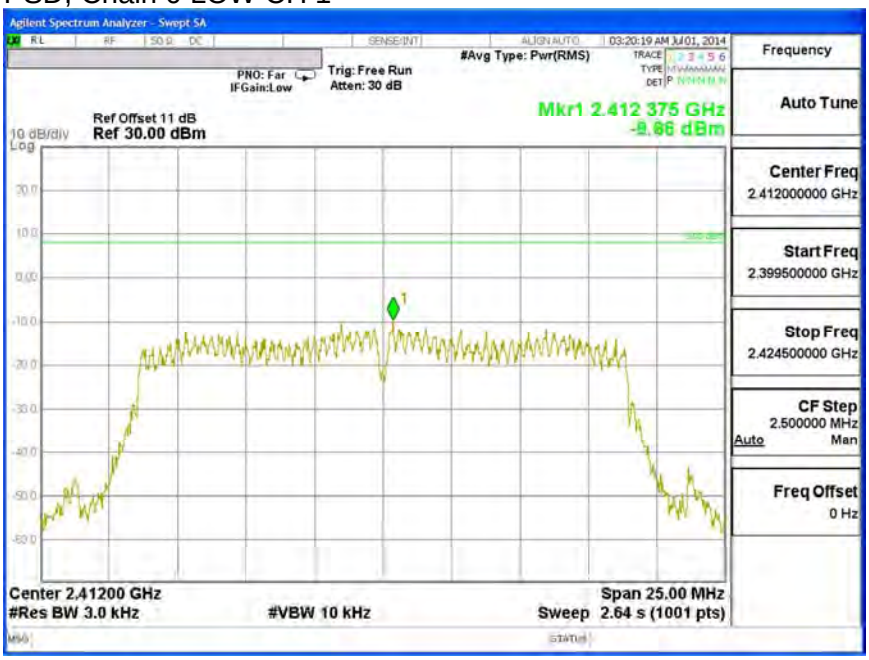
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

RESULTS

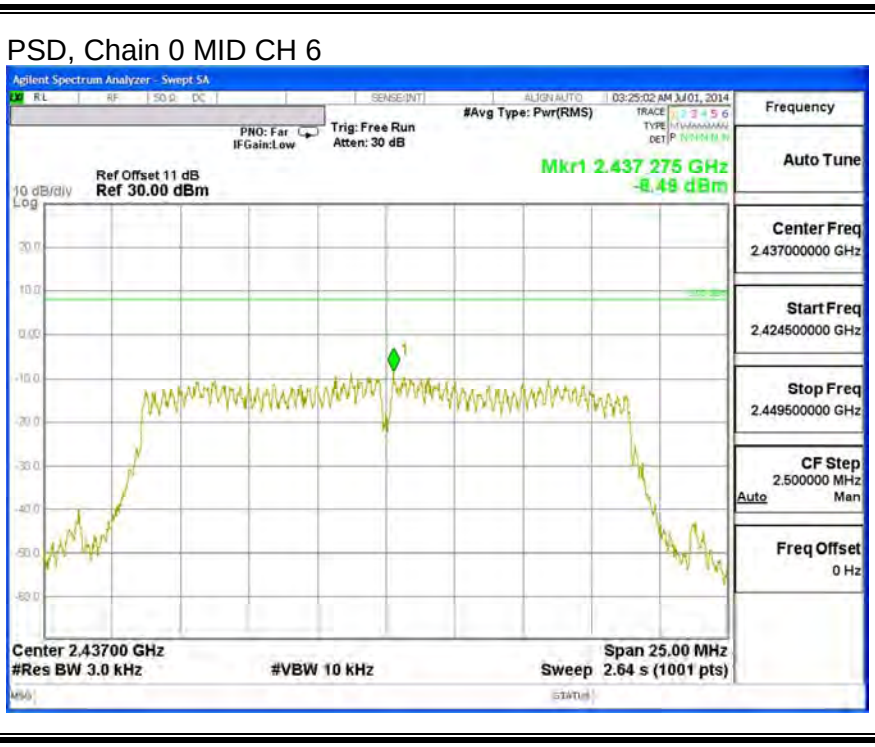
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total PSD (dBm)	Limit (dBm)	Margin (dB)
1	2412	-9.86	-10.44	-7.13	8.0	-15.1
6	2437	-8.49	-8.71	-5.59	8.0	-13.6
11	2462	-10.17	-10.25	-7.20	8.0	-15.2
12	2467	-14.52	-14.62	-11.56	8.0	-19.6
13	2472	-22.85	-22.35	-19.58	8.0	-27.6

PSD, Chain 0

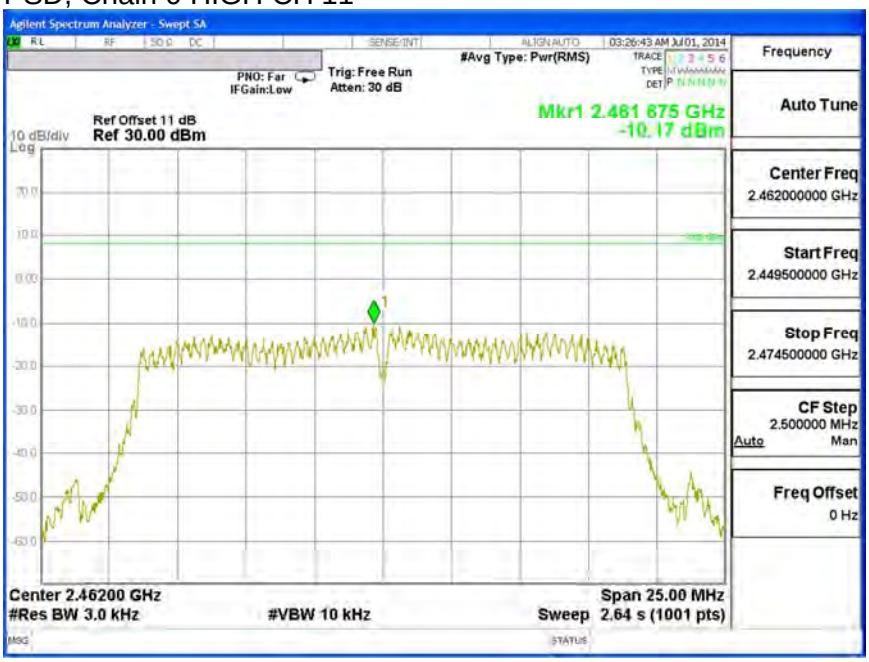
PSD, Chain 0 LOW CH 1



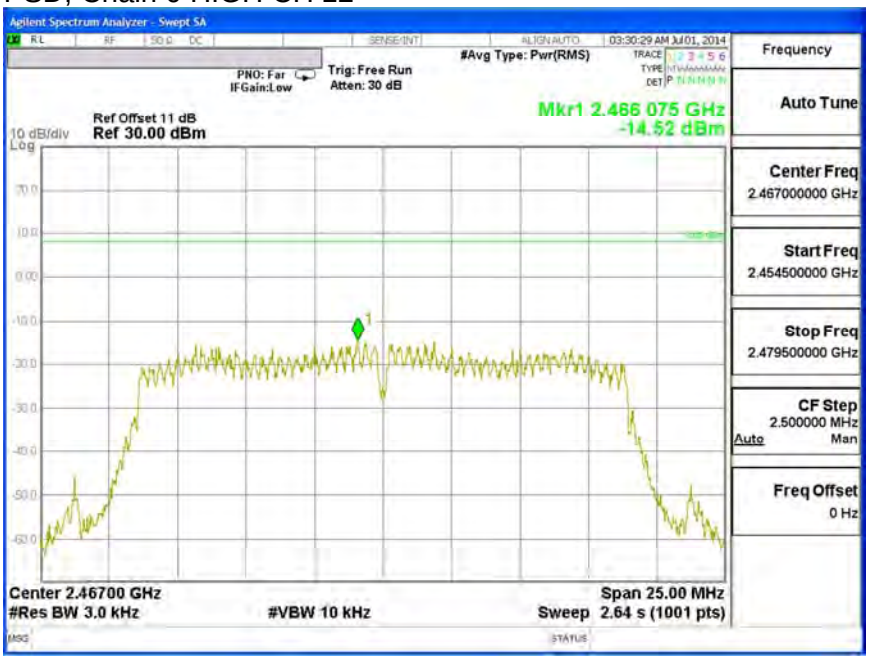
PSD, Chain 0 MID CH 6



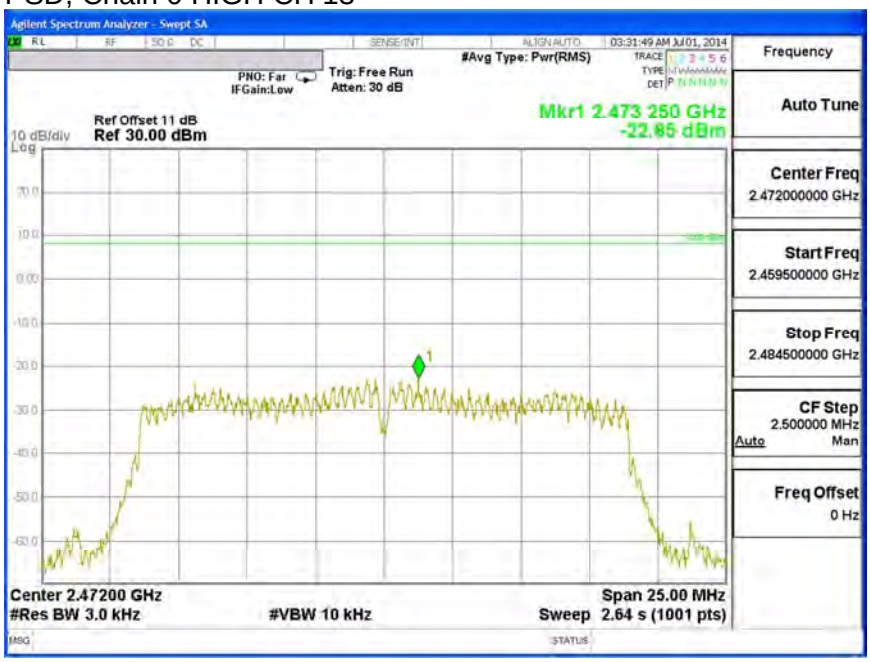
PSD, Chain 0 HIGH CH 11



PSD, Chain 0 HIGH CH 12

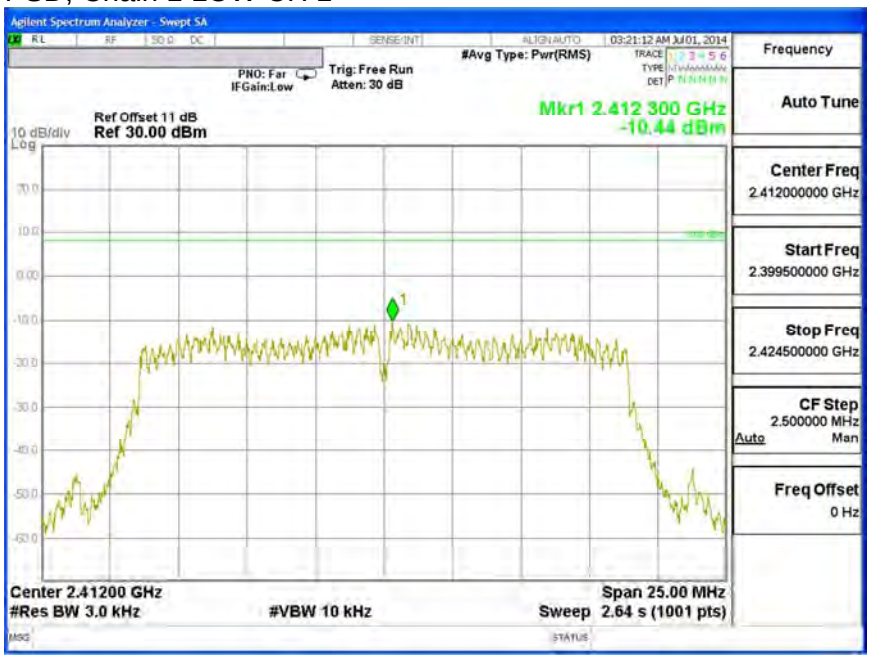


PSD, Chain 0 HIGH CH 13

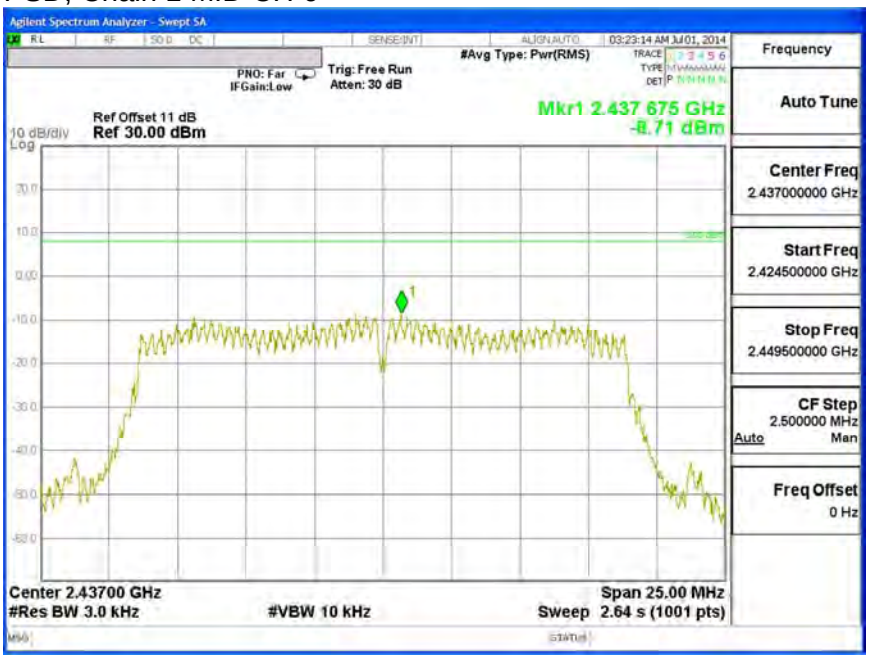


PSD, Chain 1

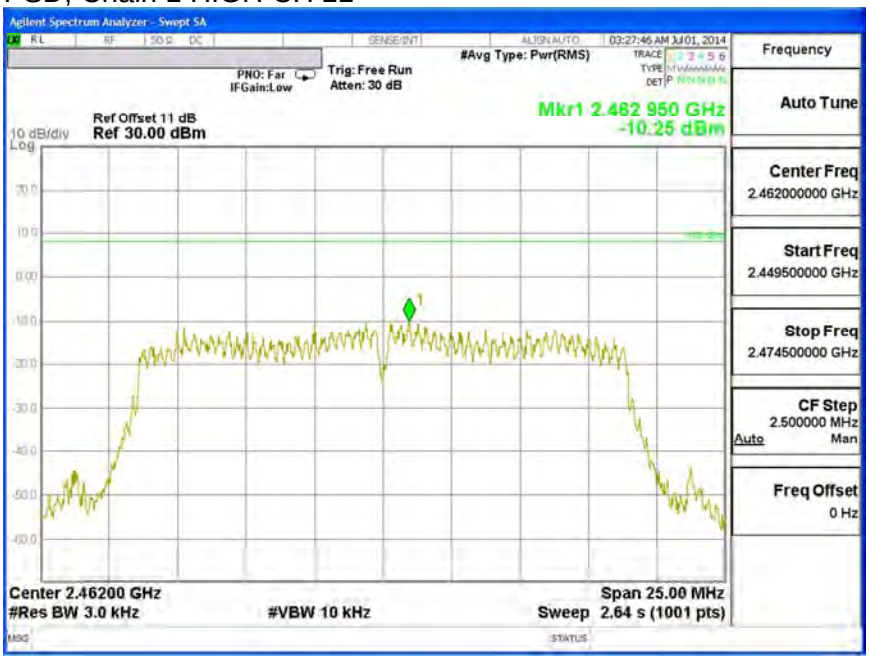
PSD, Chain 1 LOW CH 1



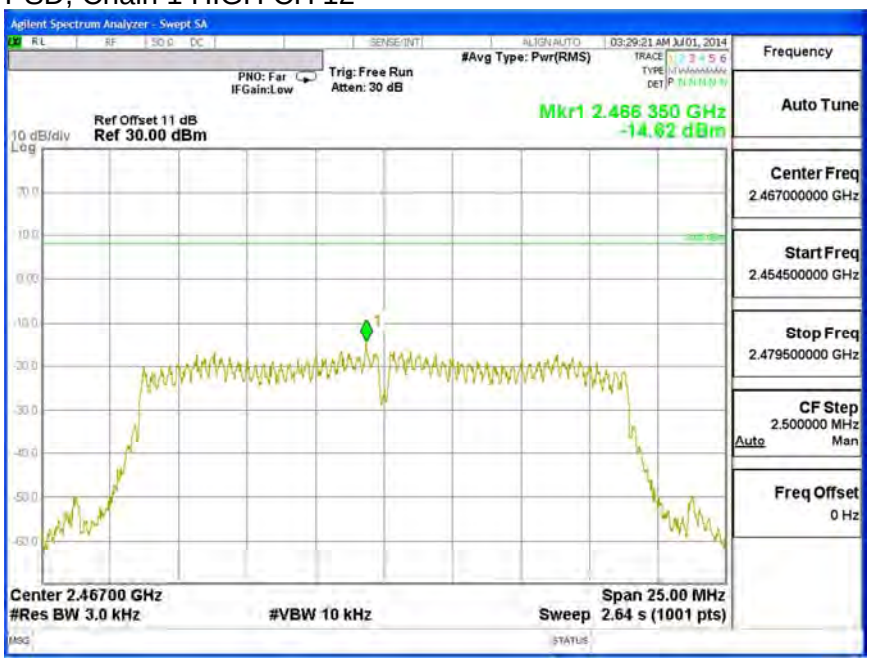
PSD, Chain 1 MID CH 6



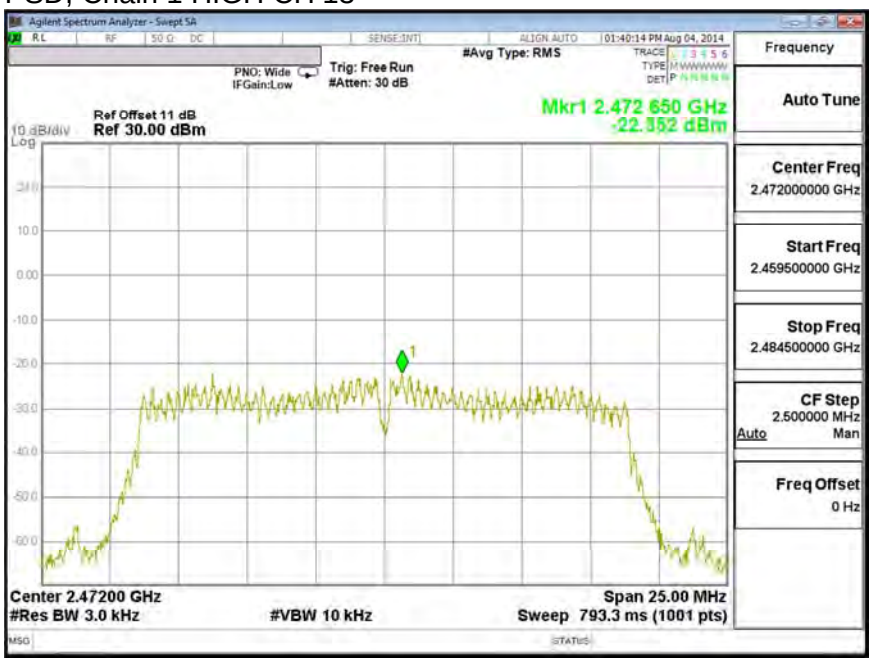
PSD, Chain 1 HIGH CH 11



PSD, Chain 1 HIGH CH 12



PSD, Chain 1 HIGH CH 13



9.3.6. OUT-OF-BAND EMISSIONS

LIMITS

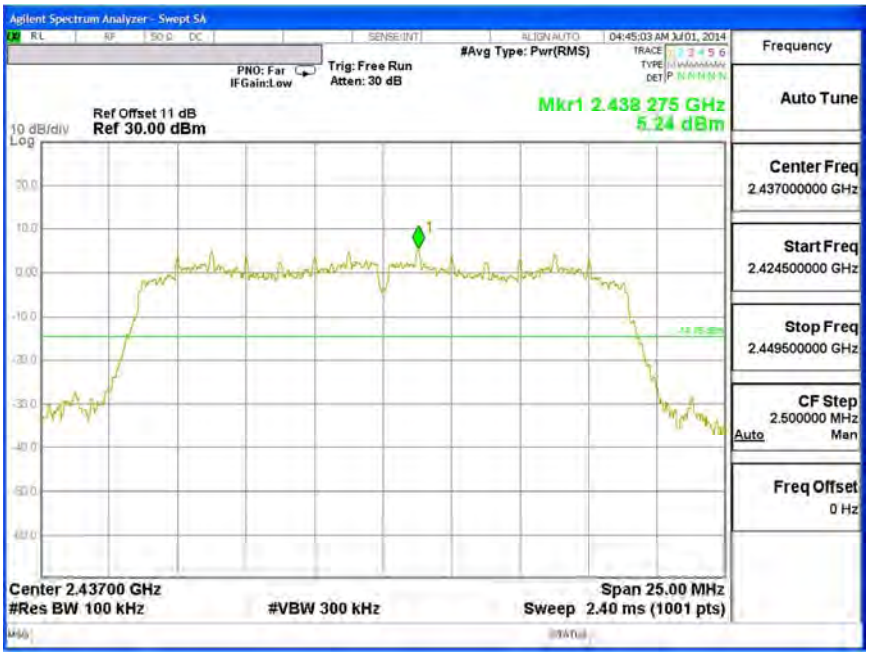
FCC §15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

RESULTS

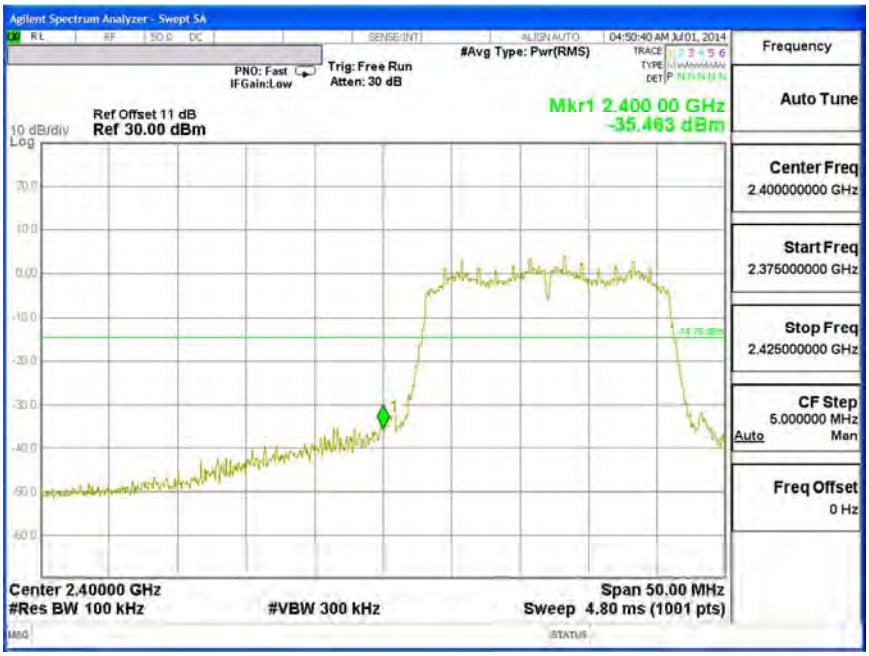
IN-BAND REFERENCE LEVEL, Chain 0

REFERENCE LEVEL Chain 0 MID CH 6



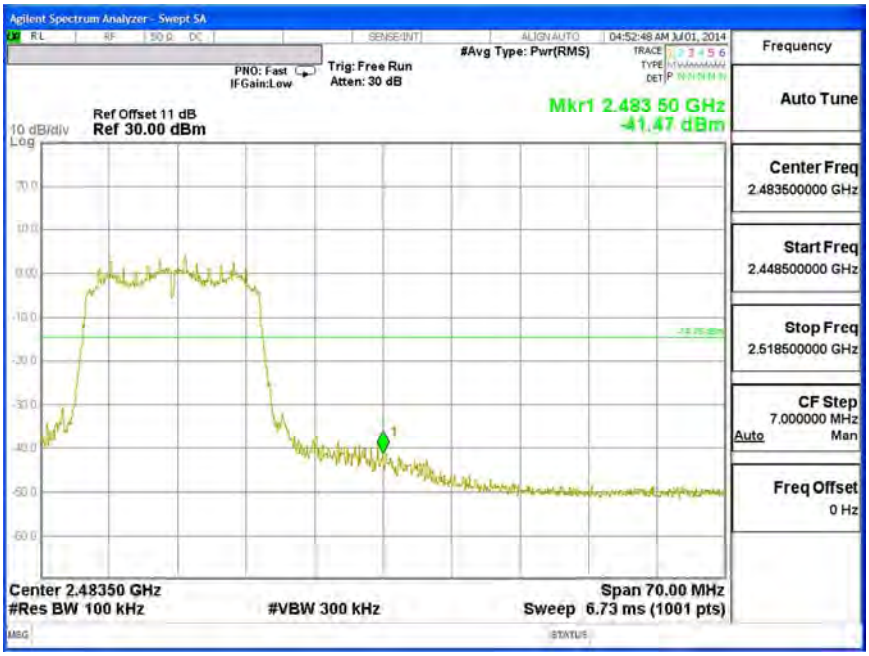
LOW CHANNEL BANDEDGE, Chain 0

AUTHORIZED BAND EDGE Chain 0 LOW CH 1

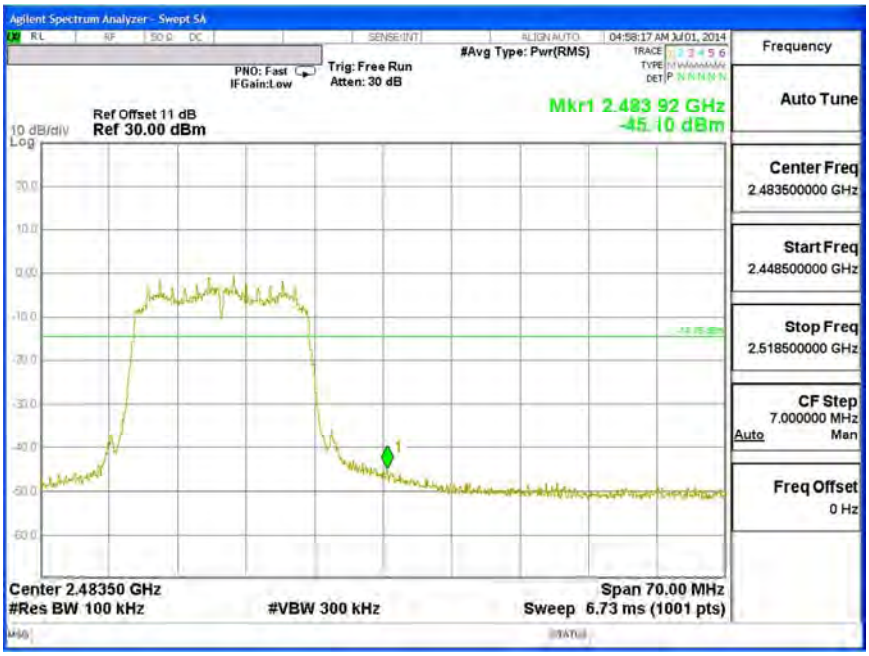


HIGH CHANNEL BANDEDGE, Chain 0

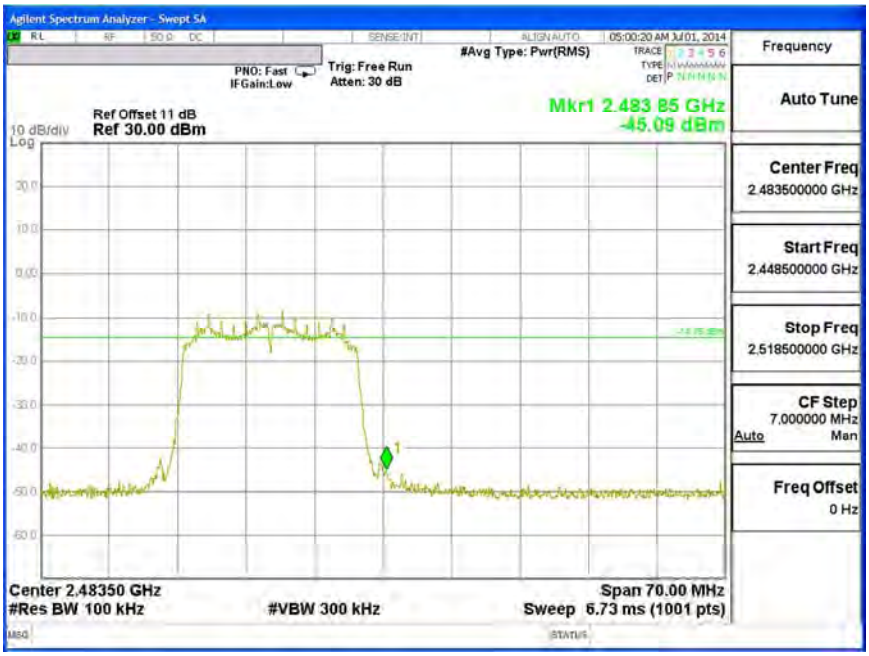
AUTHORIZED BAND EDGE Chain 0 HIGH CH 11



AUTHORIZED BAND EDGE Chain 0 HIGH CH 12

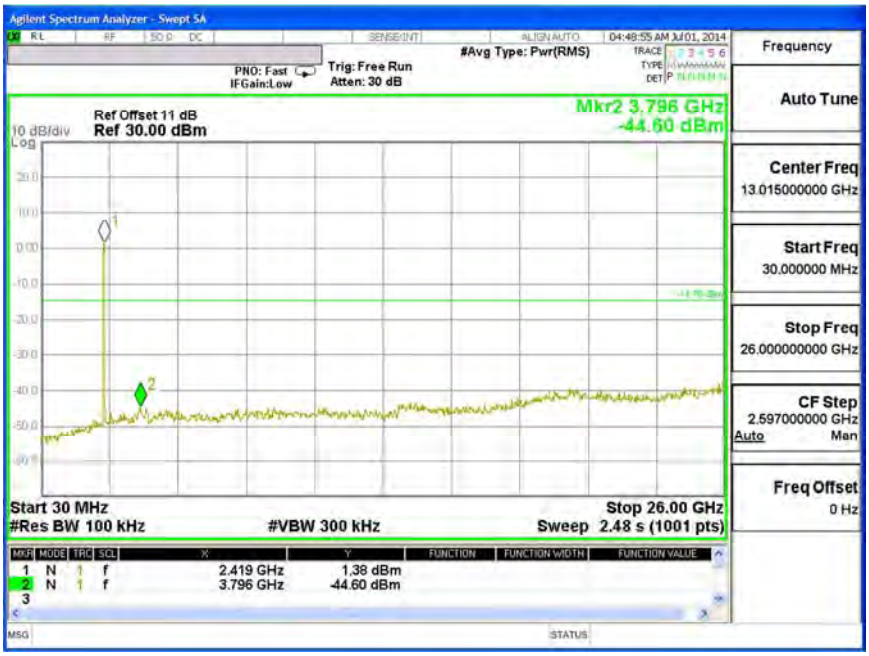


AUTHORIZED BAND EDGE Chain 0 HIGH CH 13

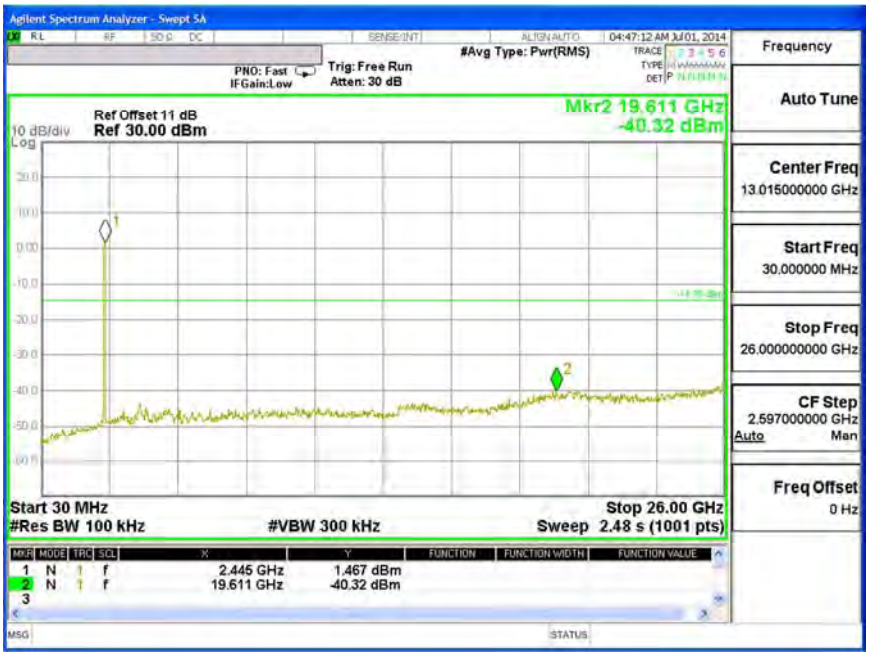


OUT-OF-BAND EMISSIONS, Chain 0

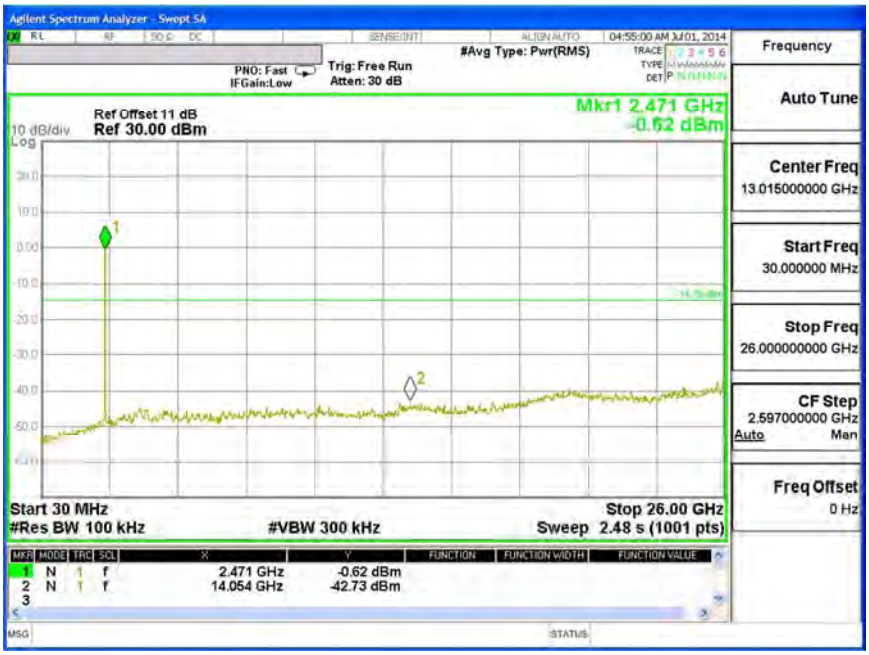
OUT OF BAND Chain 0 LOW CH 1



OUT OF BAND Chain 0 MID CH 6

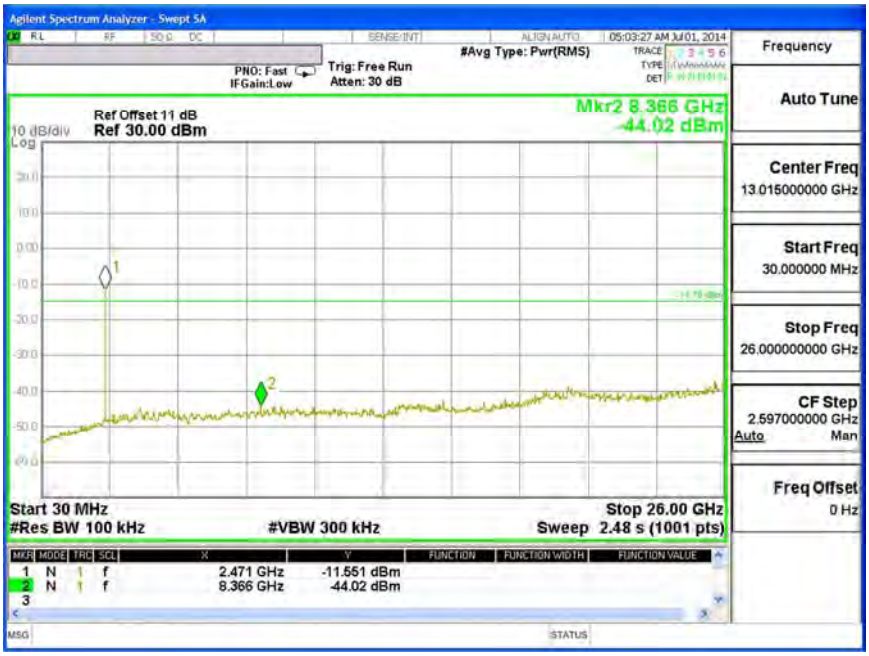


OUT OF BAND Chain 0 HIGH CH 11



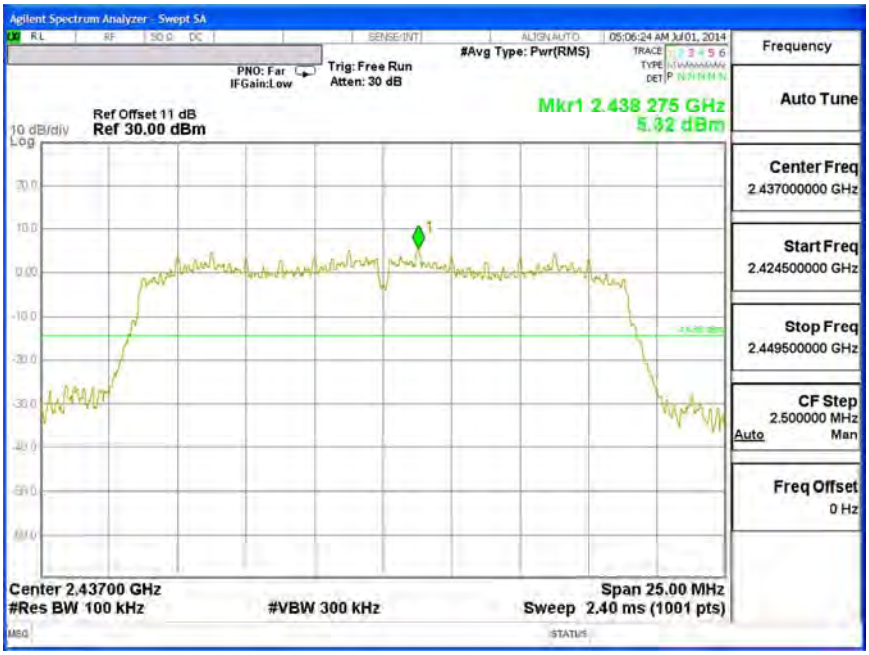
OUT OF BAND Chain 0 HIGH CH 12

OUT OF BAND Chain 0 HIGH CH 13



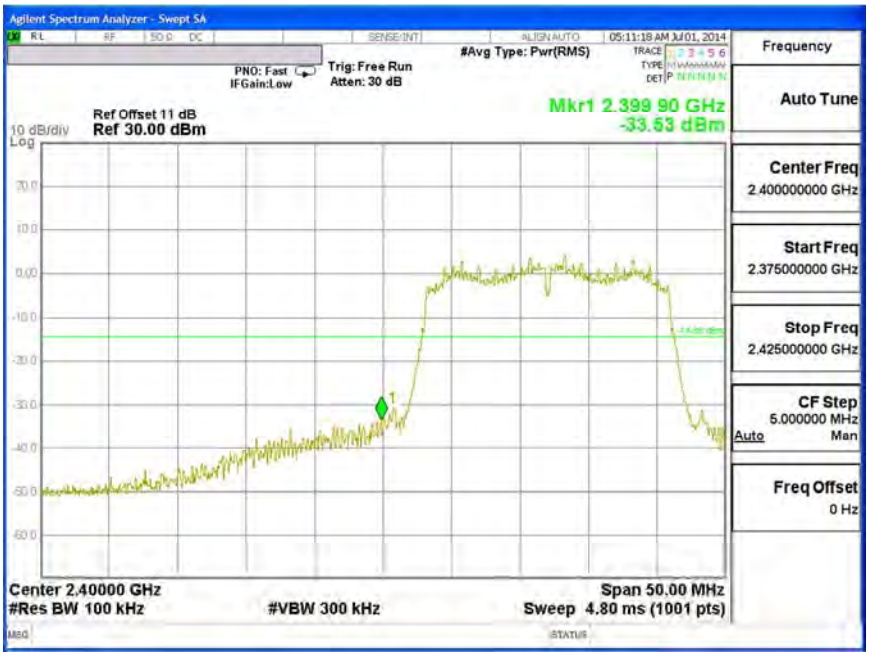
IN-BAND REFERENCE LEVEL, Chain 1

REFERENCE LEVEL Chain 1 MID CH 6



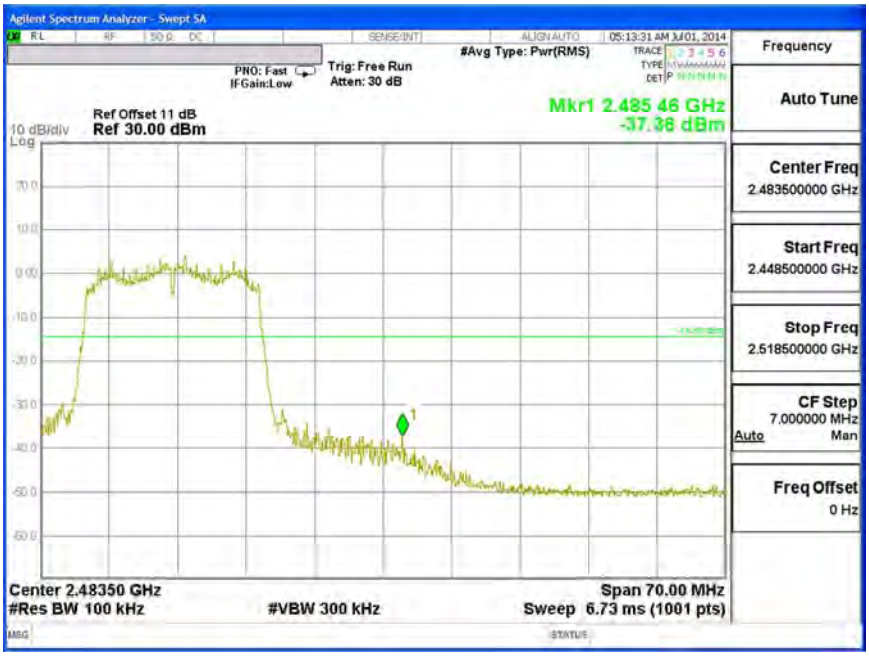
LOW CHANNEL BANDEDGE, Chain 1

AUTHORIZED BAND EDGE Chain 1 LOW CH 1

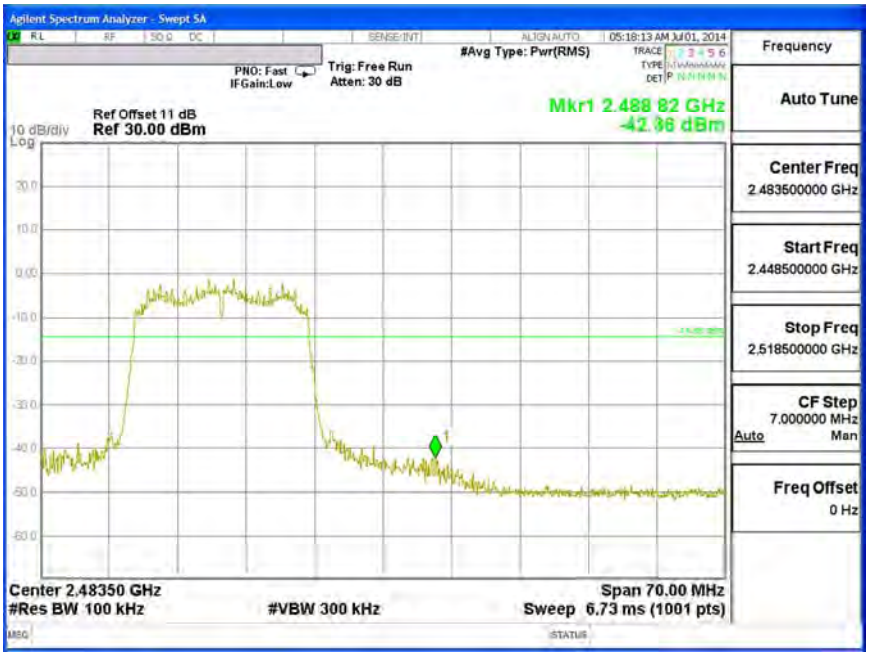


HIGH CHANNEL BANDEDGE, Chain 1

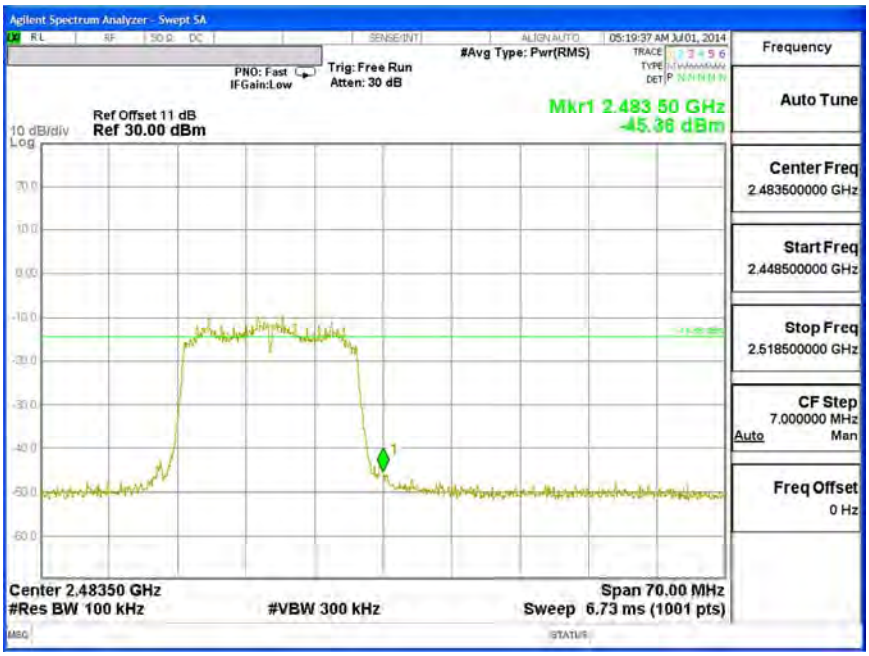
AUTHORIZED BAND EDGE Chain 1 HIGH CH 11



AUTHORIZED BAND EDGE Chain 1 HIGH CH 12

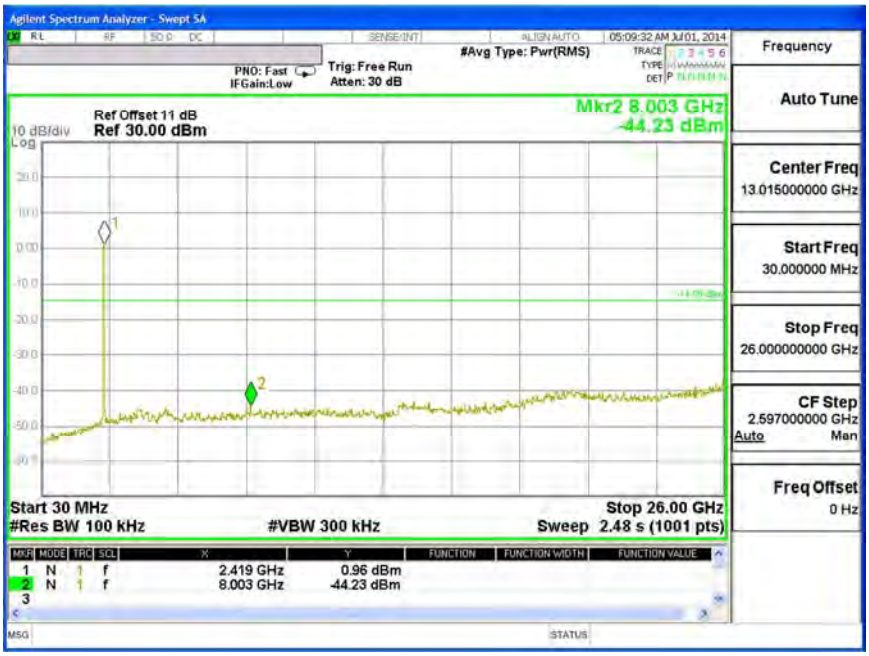


AUTHORIZED BAND EDGE Chain 1 HIGH CH 13

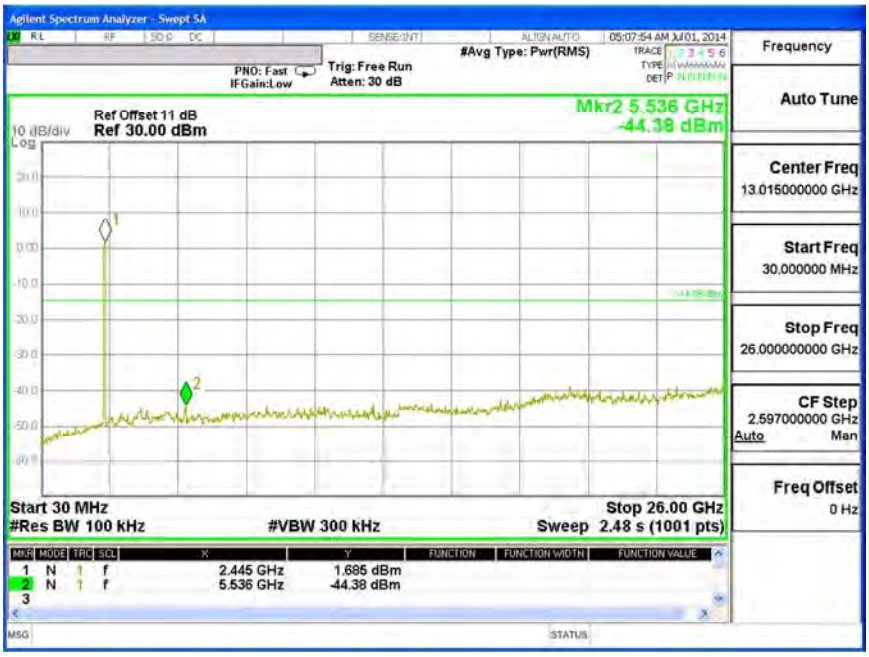


OUT-OF-BAND EMISSIONS, Chain 1

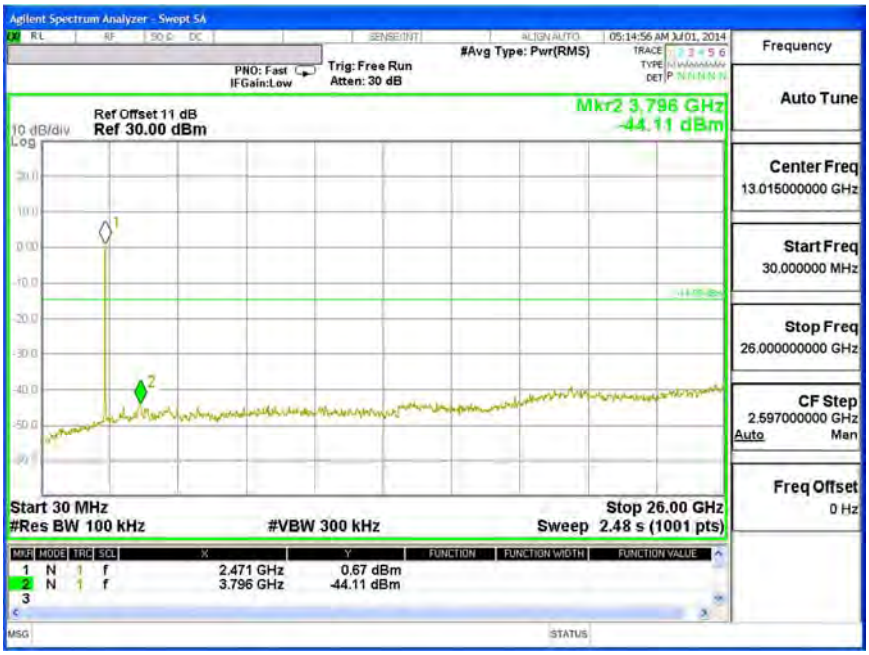
OUT OF BAND Chain 1 LOW CH 1



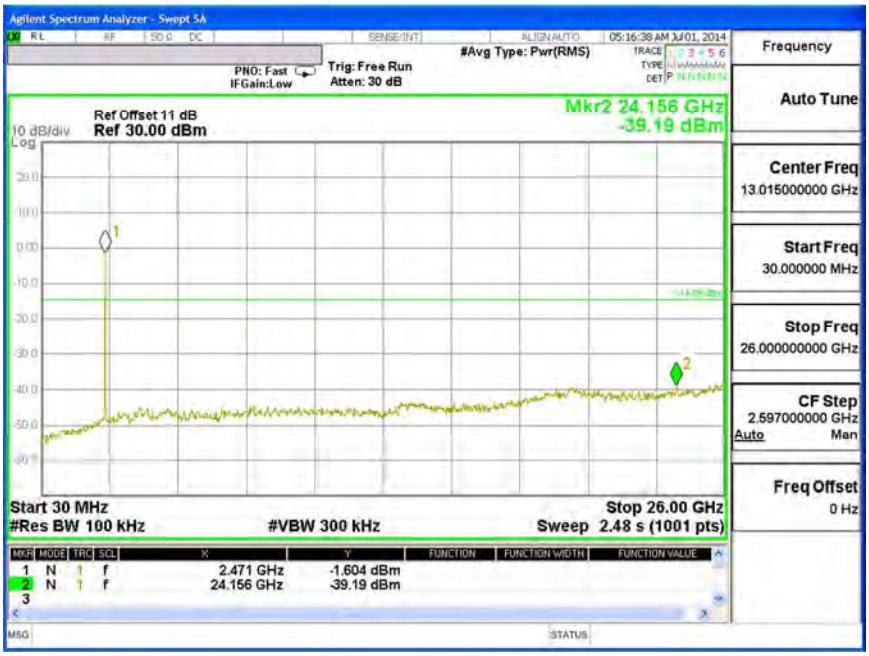
OUT OF BAND Chain 1 MID CH 6



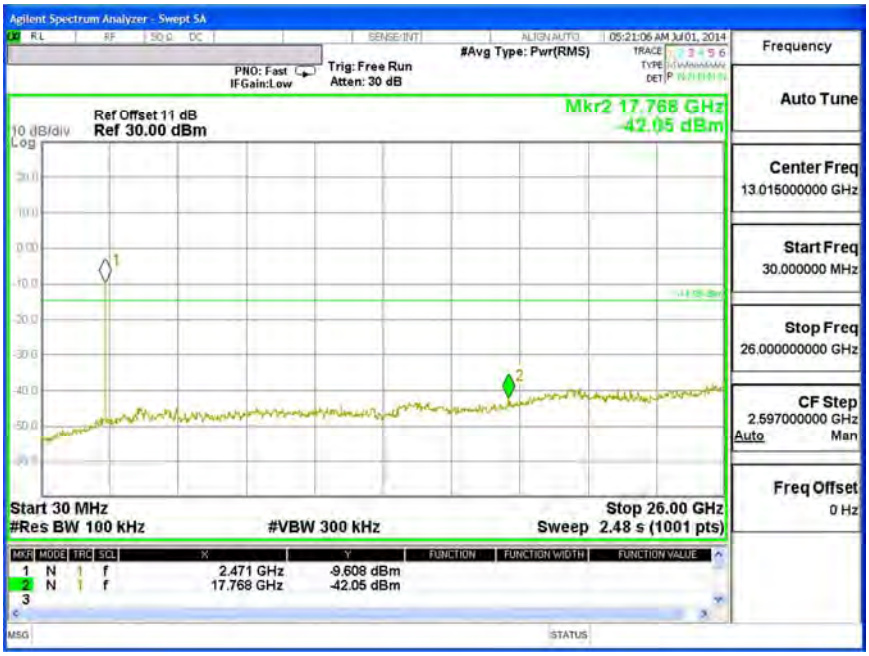
OUT OF BAND Chain 1 HIGH CH 11



OUT OF BAND Chain 1 HIGH CH 12



OUT OF BAND Chain 1 HIGH CH 13



10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

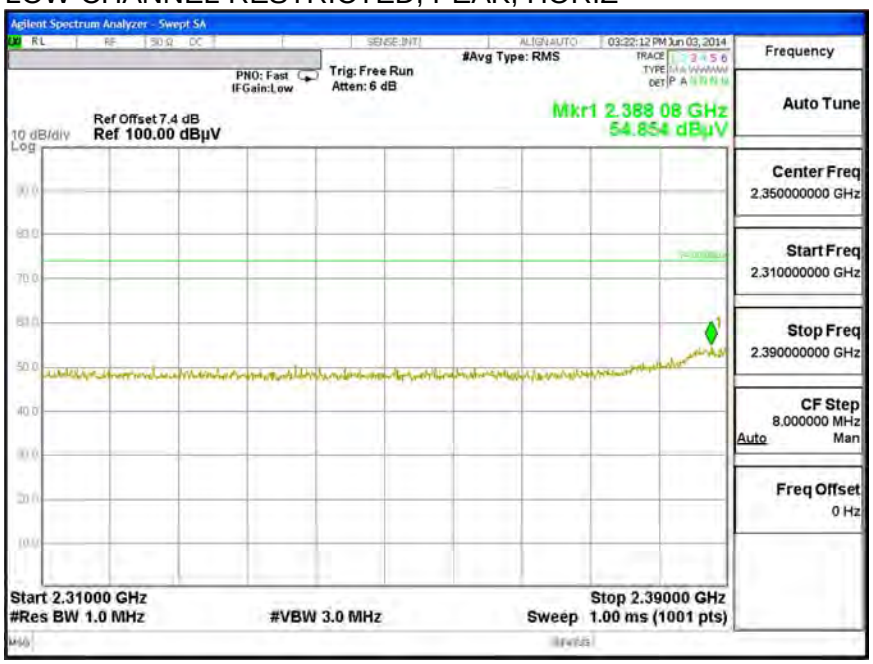
1TX mode indicates that only one antenna is transmitting. 2TX mode indicates that two antennas are transmitting simultaneously.

10.2. TX RADIATES ABOVE 1 GHz

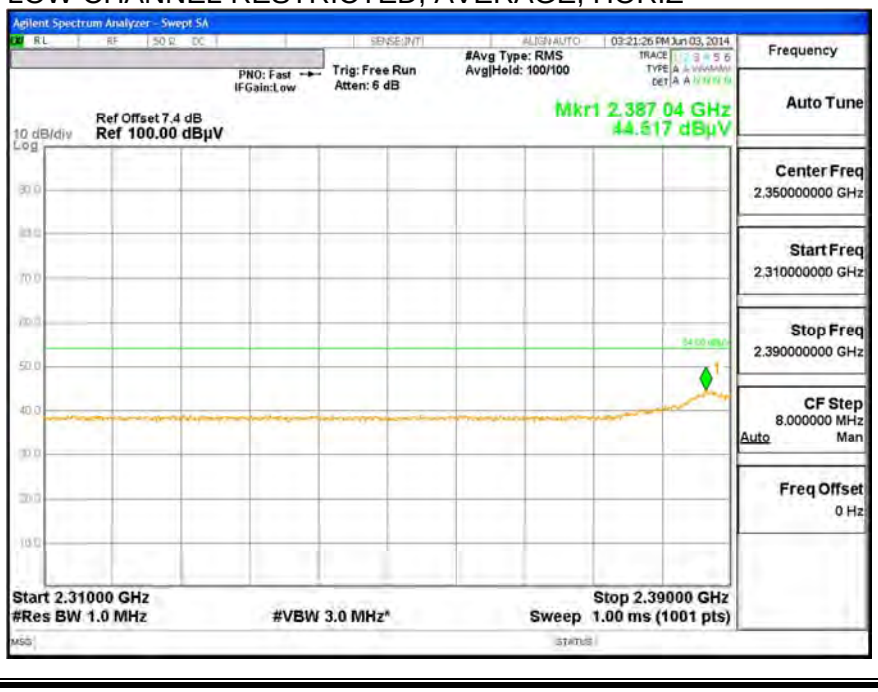
10.2.1. 802.11b 1Tx MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL, CHANNEL 1)

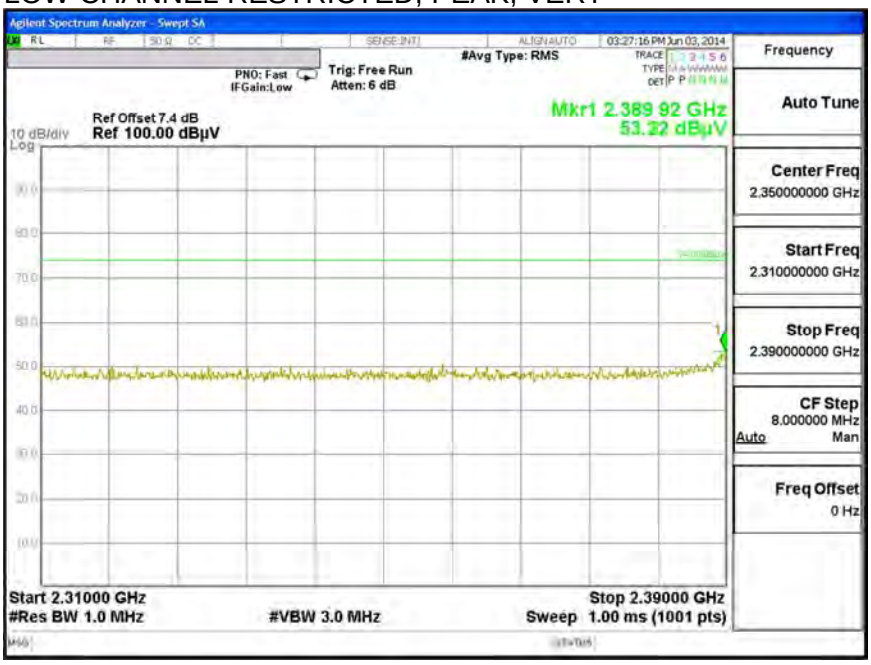
LOW CHANNEL RESTRICTED, PEAK, HORIZ



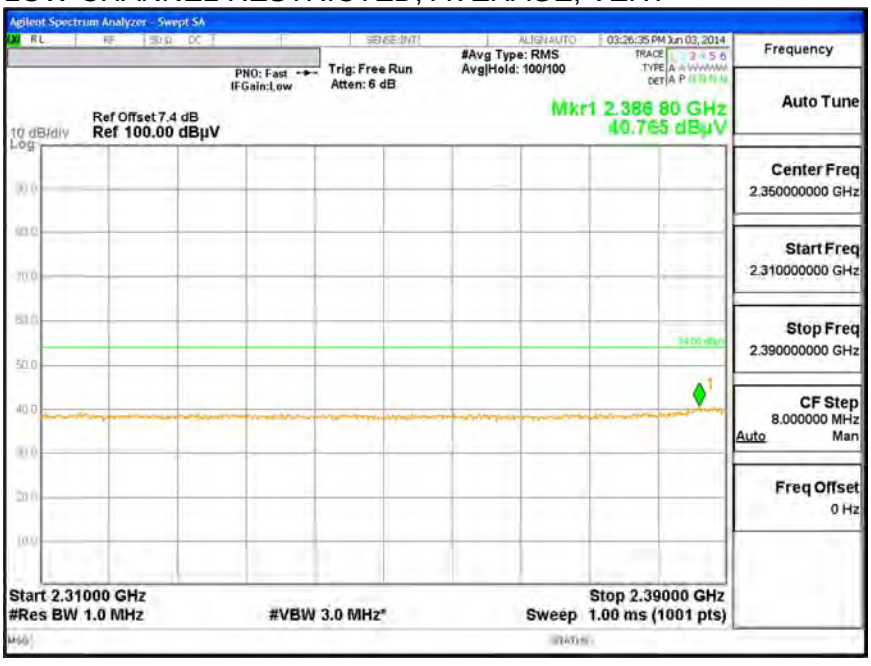
LOW CHANNEL RESTRICTED, AVERAGE, HORIZ



LOW CHANNEL RESTRICTED, PEAK, VERT

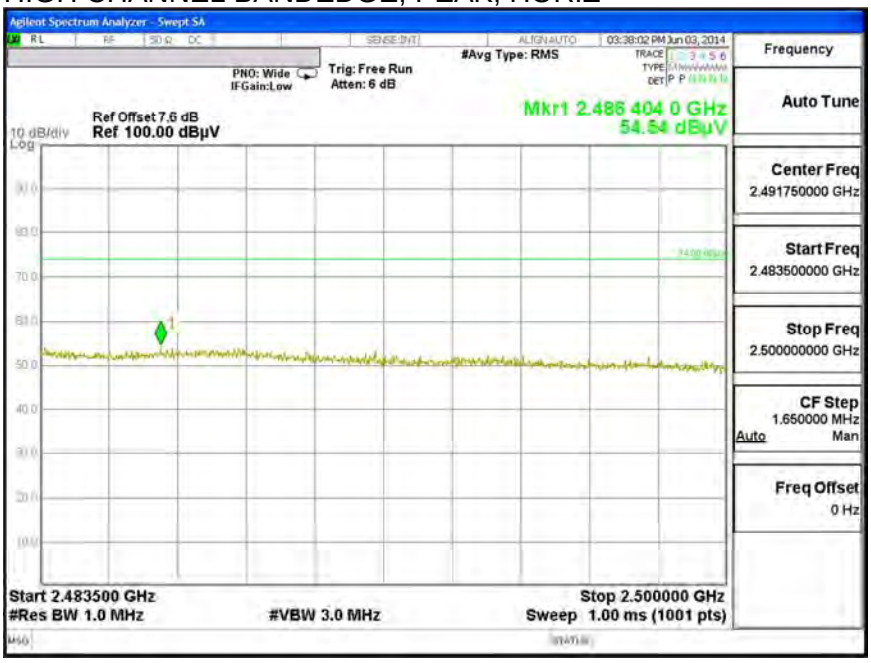


LOW CHANNEL RESTRICTED, AVERAGE, VERT

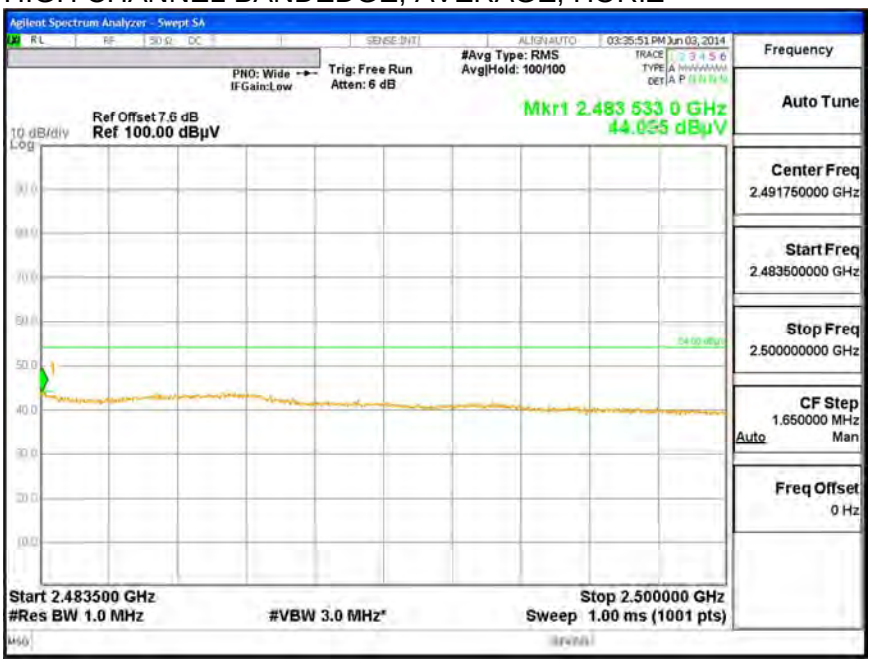


RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 11)

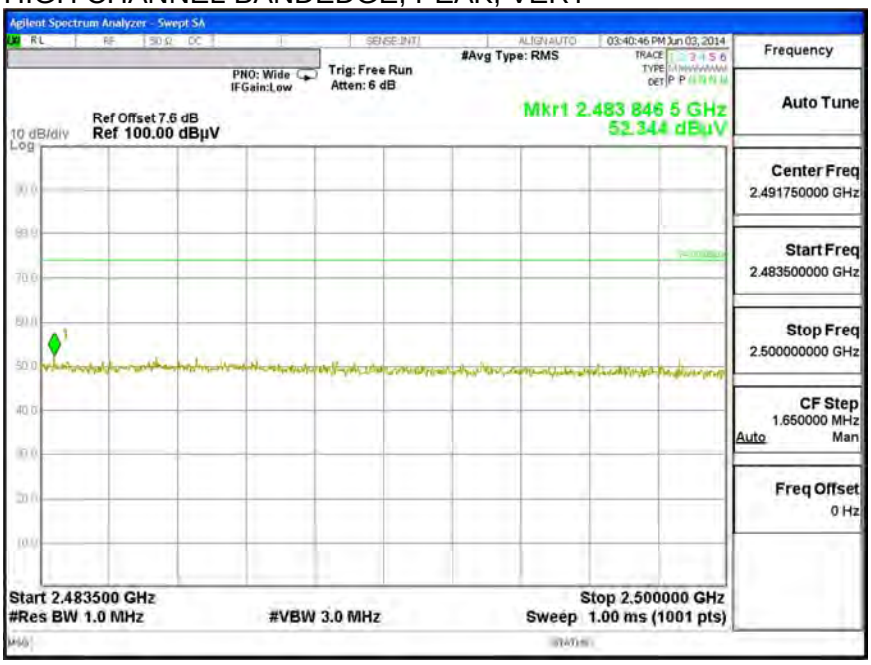
HIGH CHANNEL BANDEDGE, PEAK, HORIZ



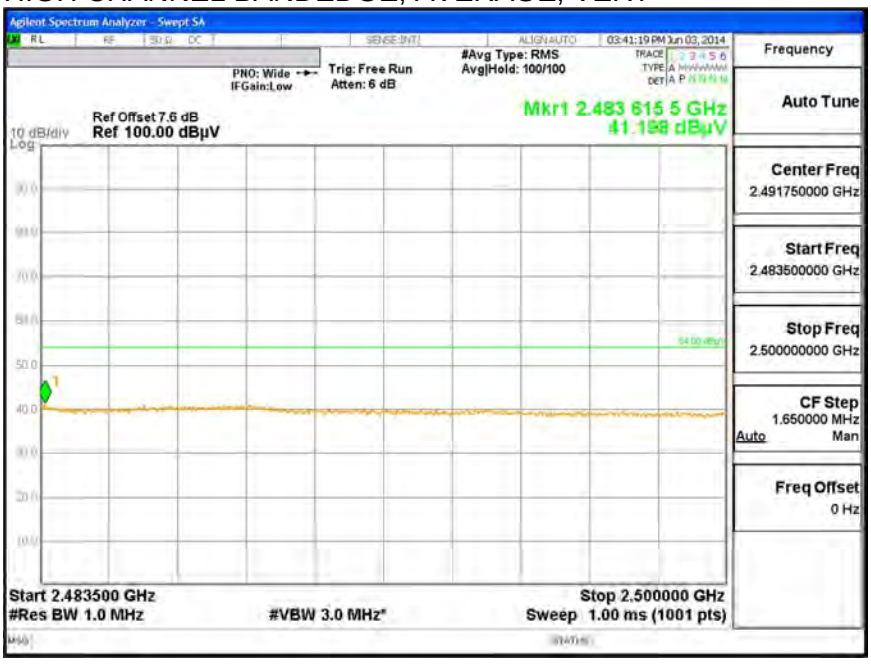
HIGH CHANNEL BANDEDGE, AVERAGE, HORIZ



HIGH CHANNEL BANDEDGE, PEAK, VERT

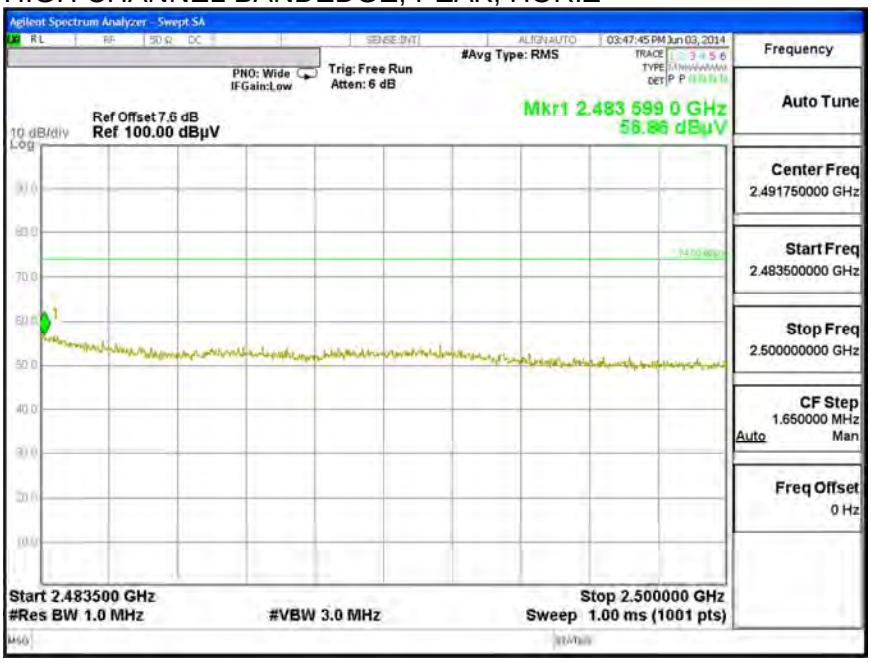


HIGH CHANNEL BANDEDGE, AVERAGE, VERT

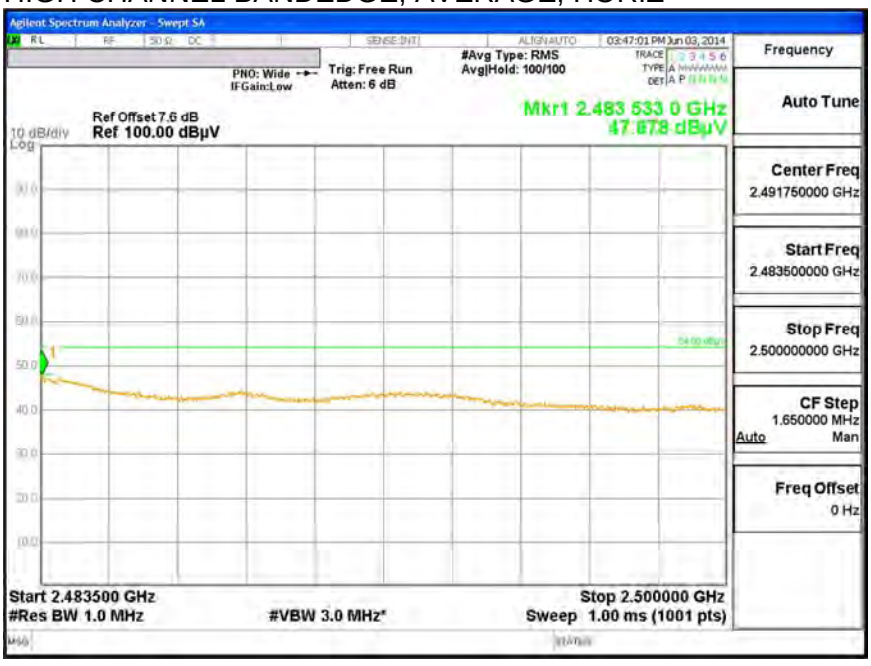


RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 12)

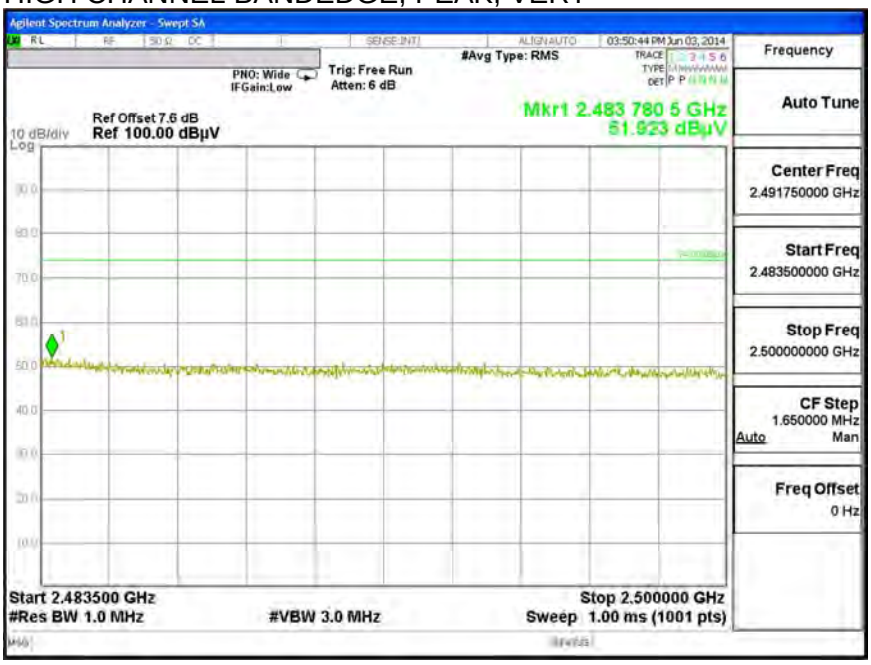
HIGH CHANNEL BANDEDGE, PEAK, HORIZ



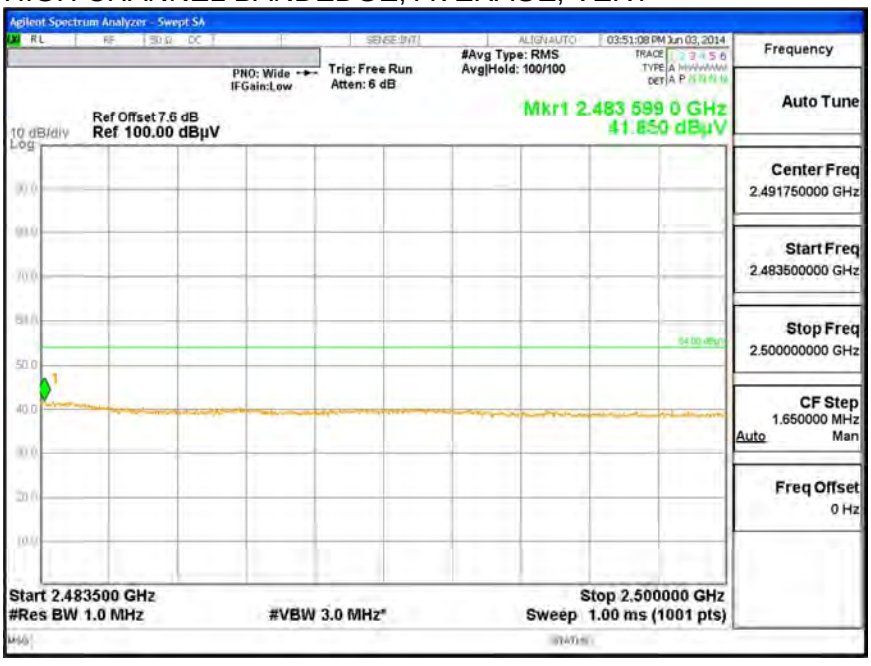
HIGH CHANNEL BANDEDGE, AVERAGE, HORIZ



HIGH CHANNEL BANDEDGE, PEAK, VERT

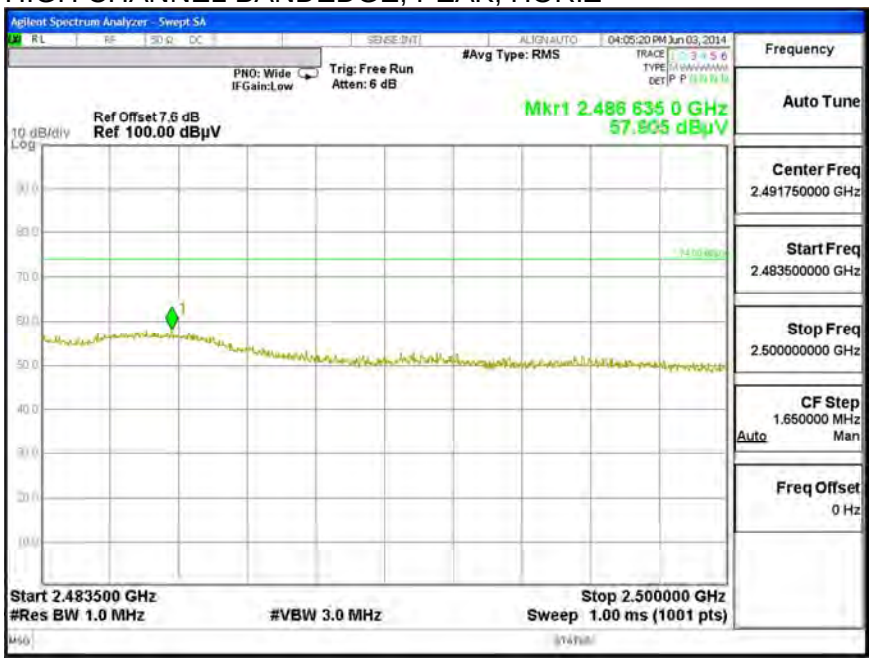


HIGH CHANNEL BANDEDGE, AVERAGE, VERT

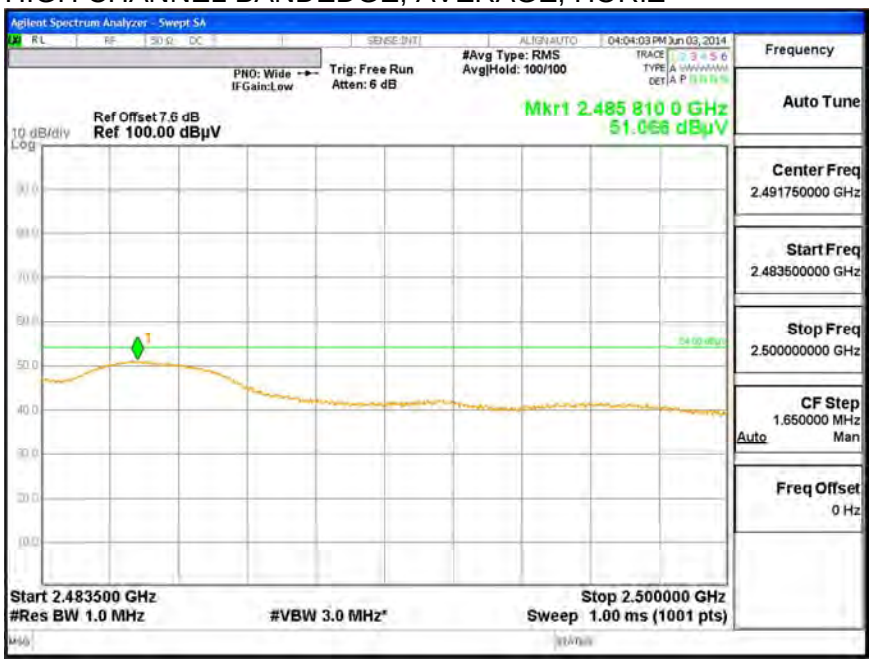


RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 13)

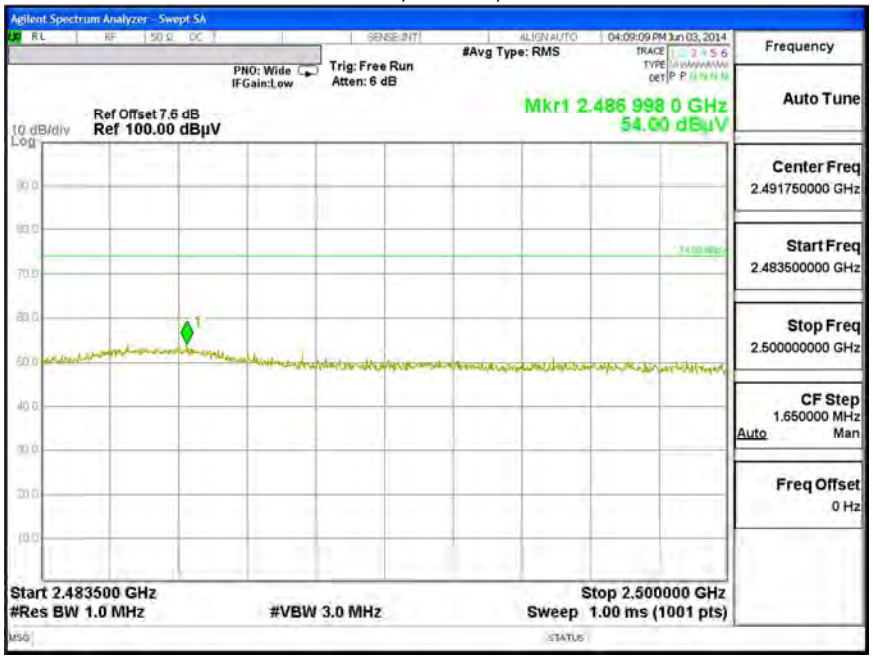
HIGH CHANNEL BANDEDGE, PEAK, HORIZ



HIGH CHANNEL BANDEDGE, AVERAGE, HORIZ



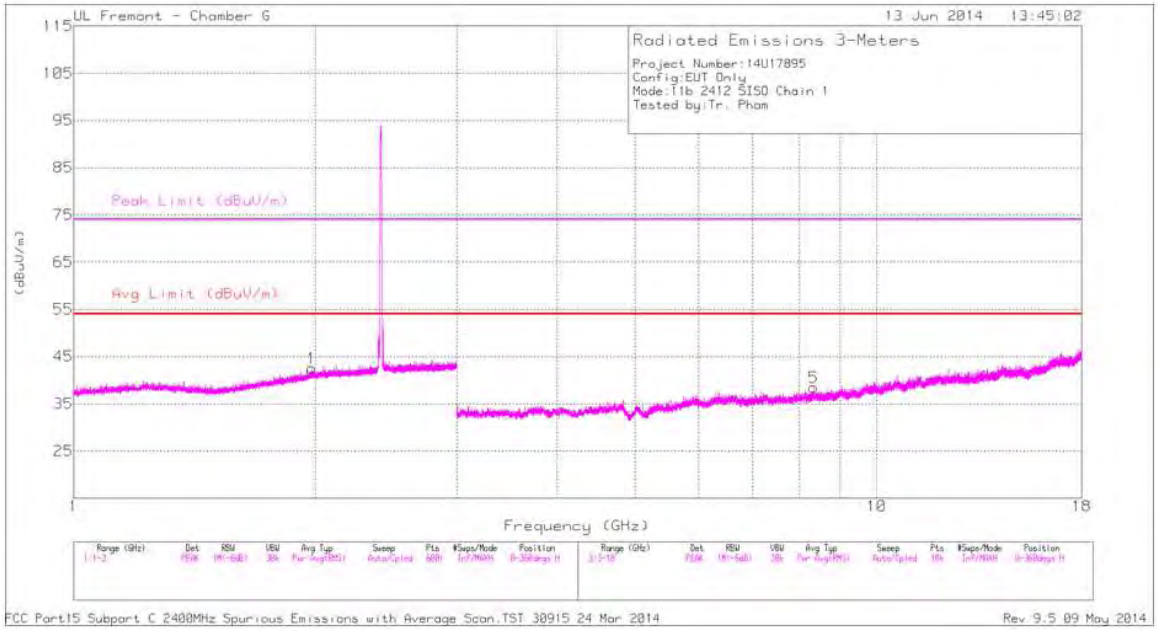
HIGH CHANNEL BANDEDGE, PEAK, VERT



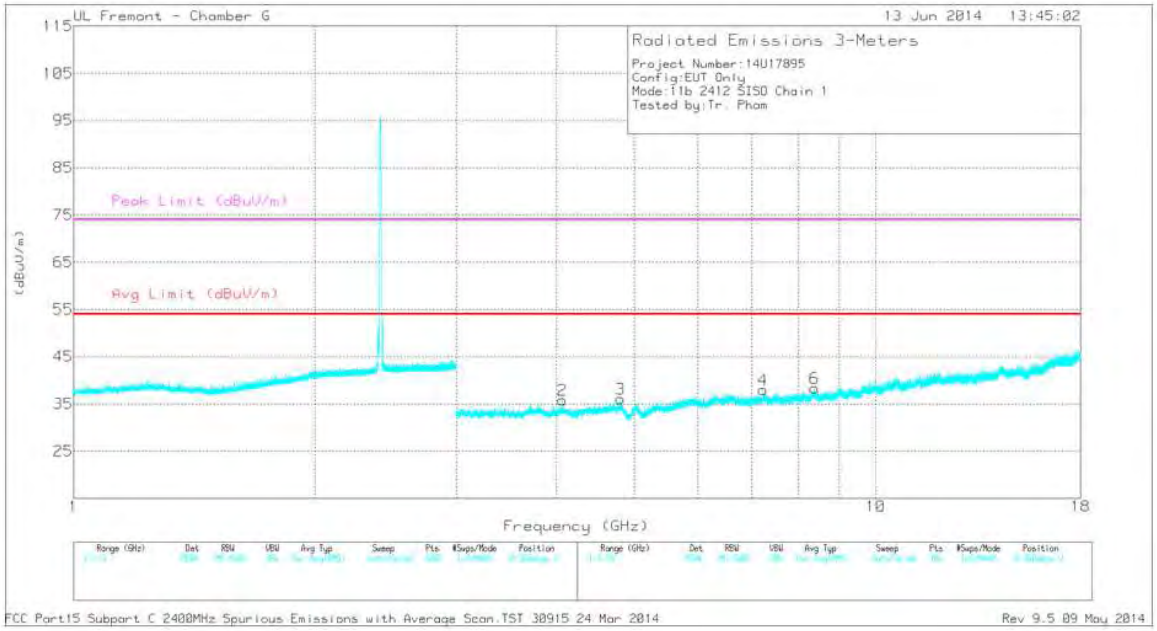
HIGH CHANNEL BANDEDGE, AVERAGE, VERT

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 1



LOW CHANNEL VERTICAL PLOT, CH 1



DATA

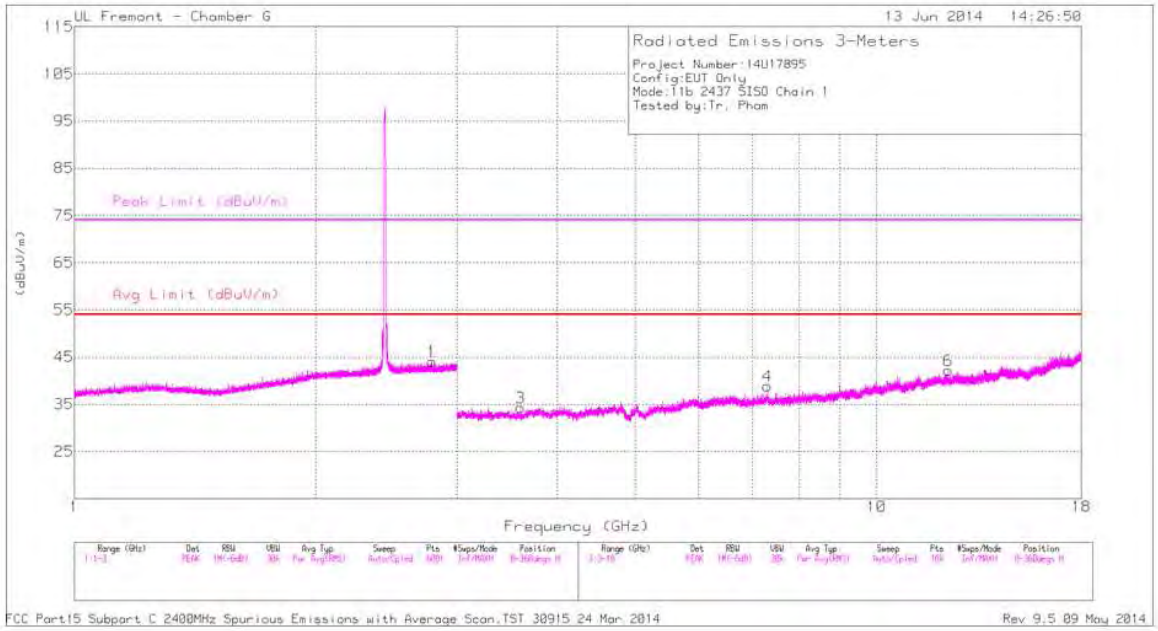
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 8.339	44.1	PK2	35.8	-30	49.9	-	-	74	-24.1	28	116	H
	* 8.339	31.77	MAv1	35.8	-30	37.57	54	-16.43	-	-	28	116	H
2	* 4.068	44.16	PK2	33.4	-32.7	44.86	-	-	74	-29.14	28	116	V
	* 4.067	32.79	MAv1	33.4	-32.7	33.49	54	-20.51	-	-	28	116	V
3	* 4.803	43.86	PK2	34.1	-33.2	44.76	-	-	74	-29.24	28	116	V
	* 4.803	32.27	MAv1	34.1	-33.2	33.17	54	-20.83	-	-	28	116	V
6	* 8.39	43.75	PK2	35.8	-29.3	50.25	-	-	74	-23.75	28	116	V
	* 8.39	31.88	MAv1	35.8	-29.3	38.38	54	-15.62	-	-	28	116	V
1	1.978	44.61	PK2	31.1	-25.4	50.31	-	-	-	-	12	106	H
4	7.234	44.49	PK2	35.6	-30.9	49.19	-	-	-	-	28	116	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

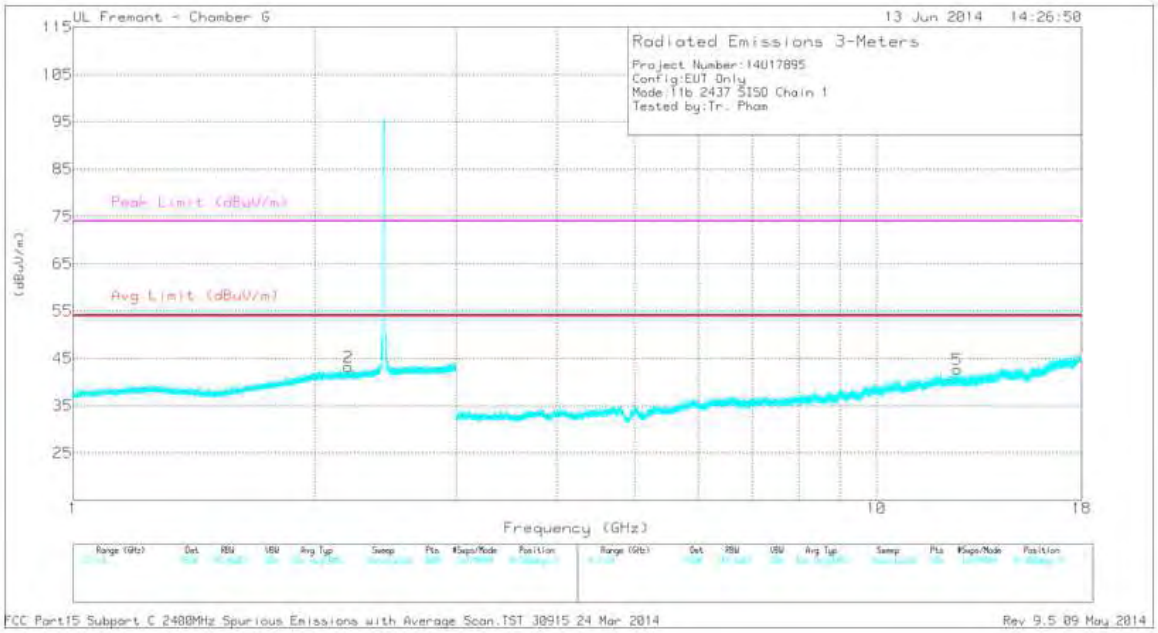
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL PLOT, CH 6



MID CHANNEL VERTICAL PLOT, CH 6



DATA

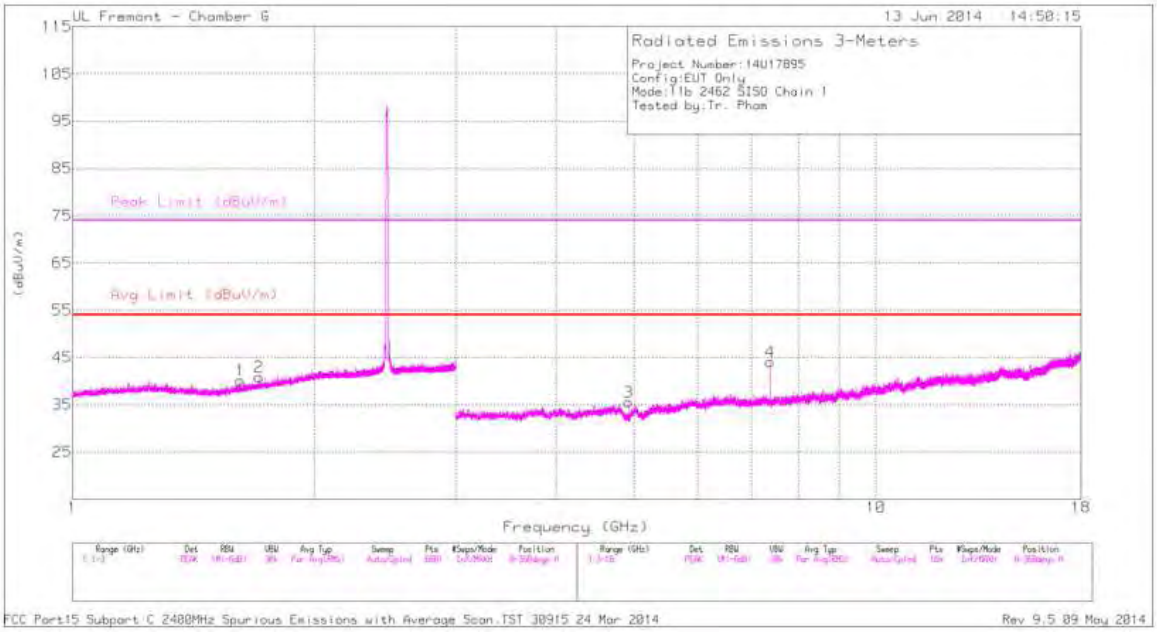
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.793	44.17	PK2	32.2	-24.9	51.47	-	-	74	-22.53	0	101	H
	* 2.792	32.63	MAv1	32.2	-24.9	39.93	54	-14.07	-	-	0	101	H
2	* 2.2	43.77	PK2	31.5	-25.1	50.17	-	-	74	-23.83	0	101	V
	* 2.2	32.74	MAv1	31.5	-25.1	39.14	54	-14.86	-	-	0	101	V
3	* 3.601	44.75	PK2	32.8	-33.7	43.85	-	-	74	-30.15	0	101	H
	* 3.602	33.19	MAv1	32.8	-33.7	32.29	54	-21.71	-	-	0	101	H
4	* 7.309	46.58	PK2	35.6	-31	51.18	-	-	74	-22.82	0	101	H
	* 7.309	37.51	MAv1	35.6	-31	42.11	54	-11.89	-	-	0	101	H
6	* 12.279	41.48	PK2	38.8	-26.2	54.08	-	-	74	-19.92	0	101	H
	* 12.28	30.11	MAv1	38.8	-26.2	42.71	54	-11.29	-	-	0	101	H
5	* 12.599	41.68	PK2	39	-26.4	54.28	-	-	74	-19.72	0	101	V
	* 12.598	30.06	MAv1	39	-26.4	42.66	54	-11.34	-	-	0	101	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

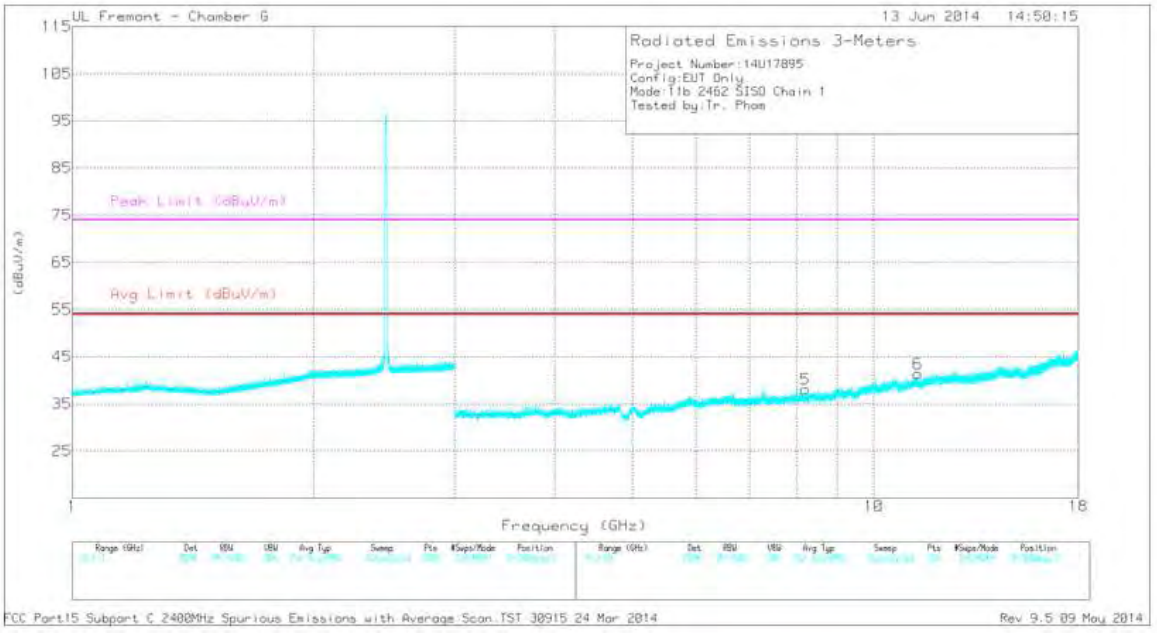
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 11



HIGH CHANNEL VERTICAL PLOT, CH 11



DATA

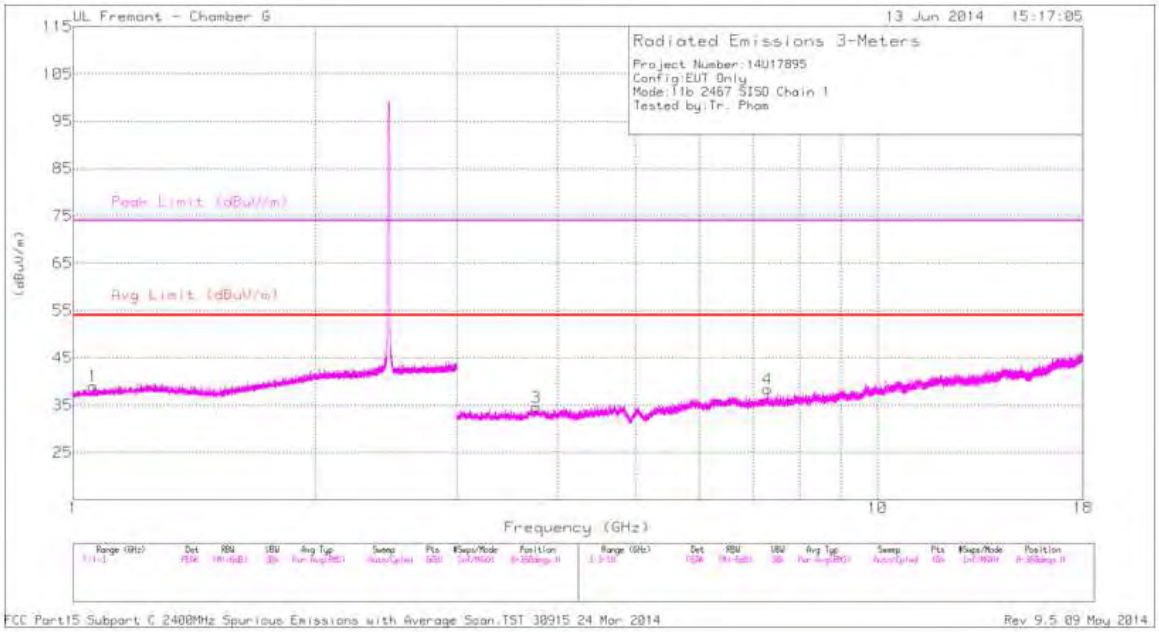
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.619	44	PK2	28.7	-25.5	47.2	-	-	74	-26.8	2	101	H
	* 1.62	32.81	MAv1	28.7	-25.5	36.01	54	-17.99	-	-	2	101	H
2	* 1.708	44.41	PK2	29.3	-25.4	48.31	-	-	74	-25.69	2	101	H
	* 1.707	32.82	MAv1	29.3	-25.4	36.72	54	-17.28	-	-	2	101	H
3	* 4.924	45.26	PK2	34.1	-33.1	46.26	-	-	74	-27.74	2	101	H
	* 4.924	33.19	MAv1	34.1	-33.1	34.19	54	-19.81	-	-	2	101	H
4	* 7.385	45.64	PK2	35.6	-31.7	49.54	-	-	74	-24.46	312	101	H
	* 7.385	36.64	MAv1	35.6	-31.7	40.54	54	-13.46	-	-	312	101	H
5	* 8.211	40.24	PK2	35.8	-29.9	46.14	-	-	74	-27.86	312	101	V
	* 8.211	27.98	MAv1	35.8	-29.9	33.88	54	-20.12	-	-	312	101	V
6	* 11.355	37.57	PK2	38.1	-26.3	49.37	-	-	74	-24.63	312	101	V
	* 11.353	25.32	MAv1	38.1	-26.2	37.22	54	-16.78	-	-	312	101	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

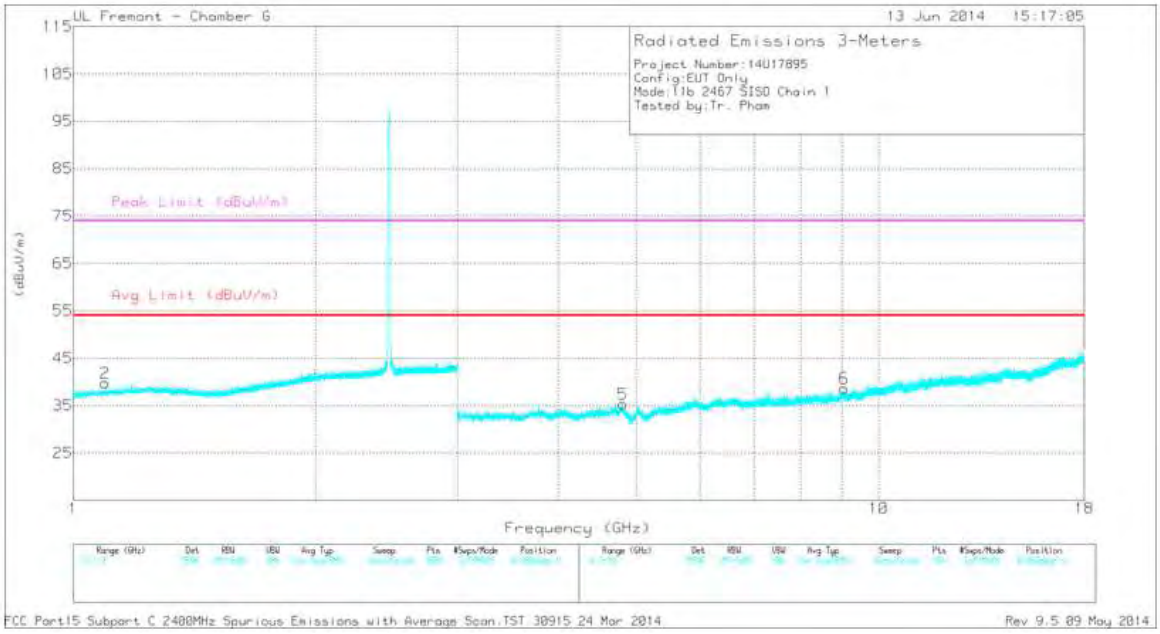
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 12



HIGH CHANNEL VERTICAL PLOT, CH 12



DATA

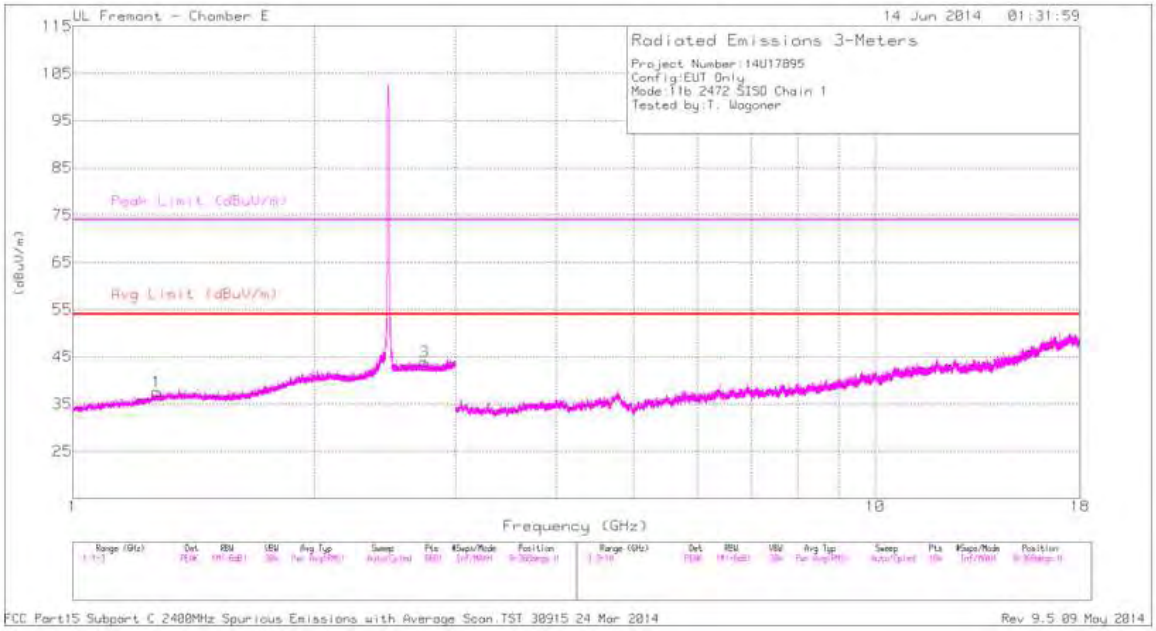
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.058	44.93	PK2	28.3	-26.1	47.13	-	-	74	-26.87	360	101	H
	* 1.059	33.05	MAv1	28.3	-26.1	35.25	54	-18.75	-	-	360	101	H
2	* 1.096	44.25	PK2	28.5	-26.1	46.65	-	-	74	-27.35	360	101	V
	* 1.096	33.13	MAv1	28.5	-26.1	35.53	54	-18.47	-	-	360	101	V
3	* 3.763	45.37	PK2	32.9	-32.2	46.07	-	-	74	-27.93	360	101	H
	* 3.764	33.78	MAv1	32.9	-32.2	34.48	54	-19.52	-	-	360	101	H
4	* 7.296	43.75	PK2	35.6	-30.7	48.65	-	-	74	-25.35	360	101	H
	* 7.297	31.94	MAv1	35.6	-30.7	36.84	54	-17.16	-	-	360	101	H
5	* 4.813	43.52	PK2	34.1	-33.1	44.52	-	-	74	-29.48	360	101	V
	* 4.814	32	MAv1	34.1	-33.1	33	54	-21	-	-	360	101	V
6	* 9.066	42.72	PK2	36.4	-28.8	50.32	-	-	74	-23.68	360	101	V
	* 9.065	31.19	MAv1	36.4	-28.7	38.89	54	-15.11	-	-	360	101	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

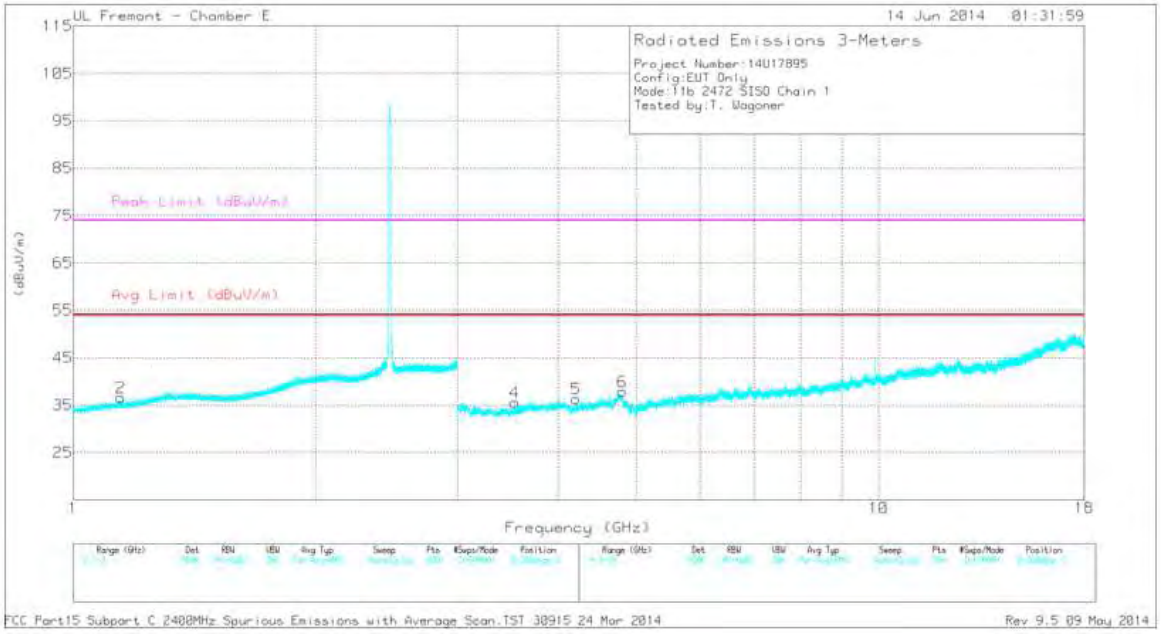
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 13



HIGH CHANNEL VERTICAL PLOT, CH 13



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.273	38.57	PK2	28.7	-27.1	40.17	-	-	74	-33.83	91	363	H
	* 1.272	32.36	MAv1	28.7	-27.1	33.96	54	-20.04	-	-	91	363	H
3	* 2.745	38.22	PK2	32.4	-23.8	46.82	-	-	74	-27.18	88	365	H
	* 2.745	31.64	MAv1	32.4	-23.8	40.24	54	-13.76	-	-	88	365	H
2	* 1.144	39.32	PK2	27.8	-27.6	39.52	-	-	74	-34.48	106	140	V
	* 1.145	32.62	MAv1	27.8	-27.6	32.82	54	-21.18	-	-	106	140	V
4	* 3.529	36.99	PK2	33	-31.9	38.09	-	-	74	-35.91	337	297	V
	* 3.528	30.29	MAv1	33	-31.9	31.39	54	-22.61	-	-	337	297	V
5	* 4.208	37.53	PK2	33.4	-31.6	39.33	-	-	74	-34.67	253	202	V
	* 4.211	30.47	MAv1	33.4	-31.6	32.27	54	-21.73	-	-	253	202	V
6	* 4.806	37.25	PK2	34.1	-30.9	40.45	-	-	74	-33.55	160	288	V
	* 4.805	30.39	MAv1	34.1	-30.9	33.59	54	-20.41	-	-	160	288	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

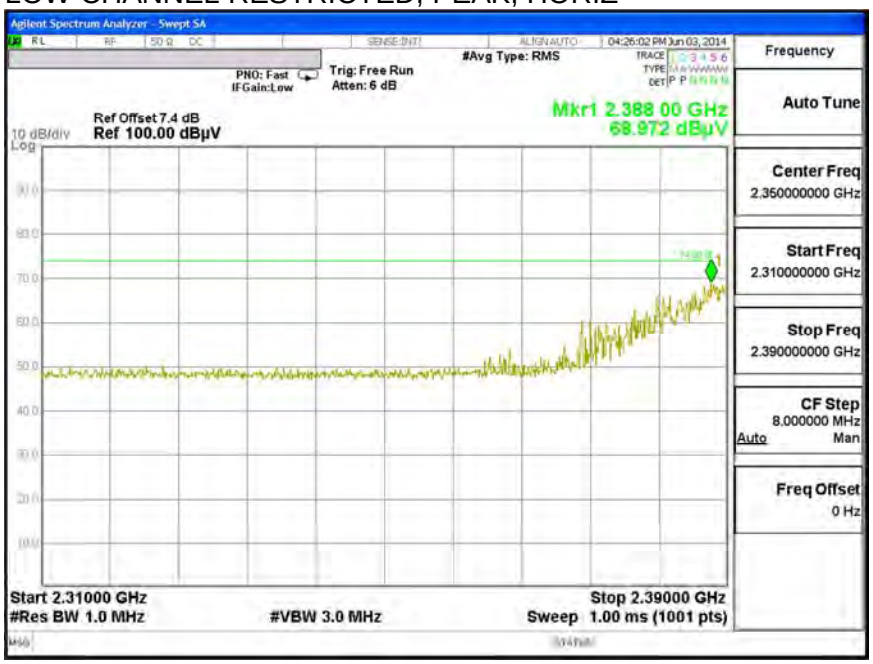
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

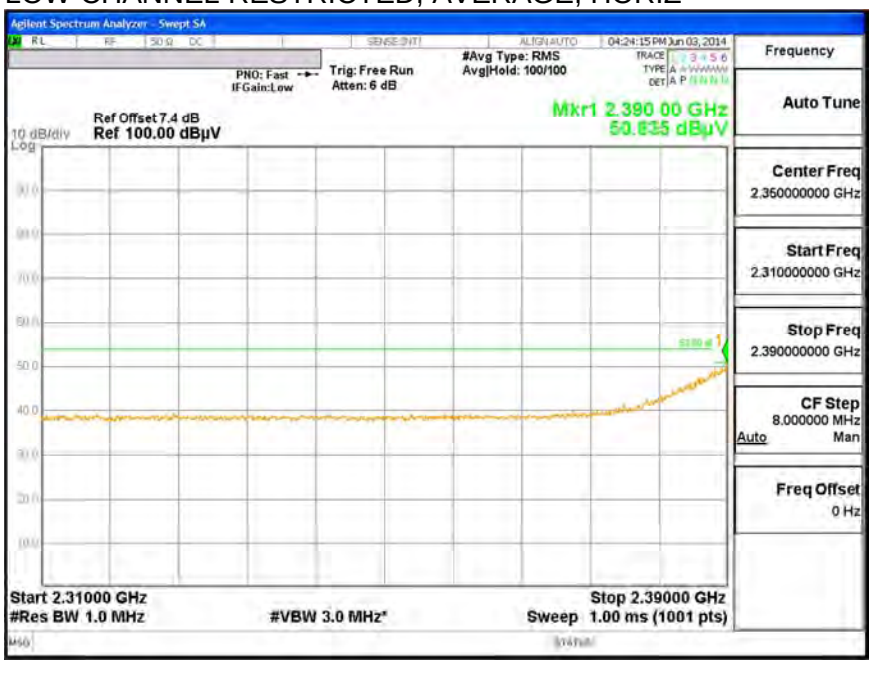
10.2.2.802.11g 1Tx MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL, CHANNEL 1)

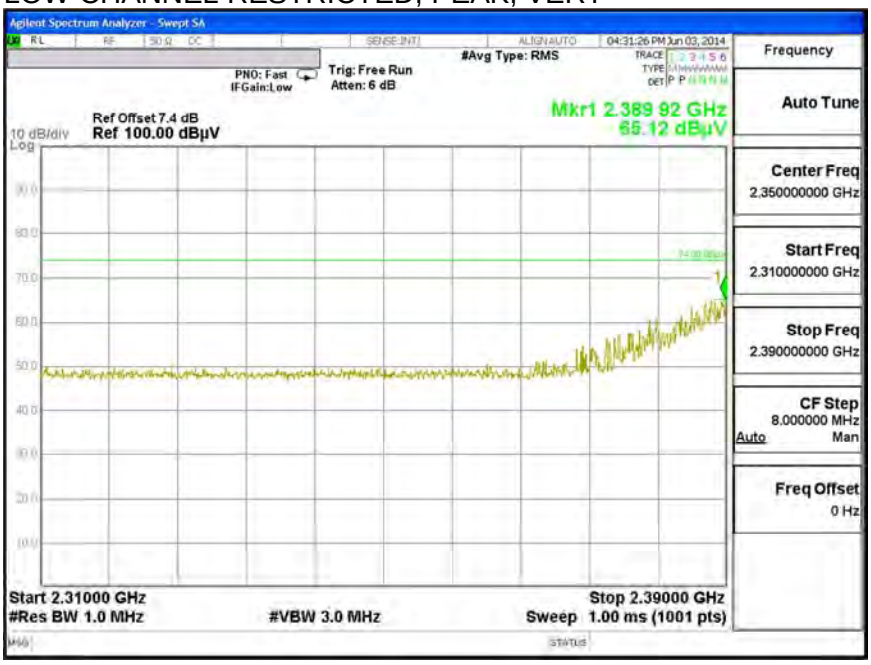
LOW CHANNEL RESTRICTED, PEAK, HORIZ



LOW CHANNEL RESTRICTED, AVERAGE, HORIZ



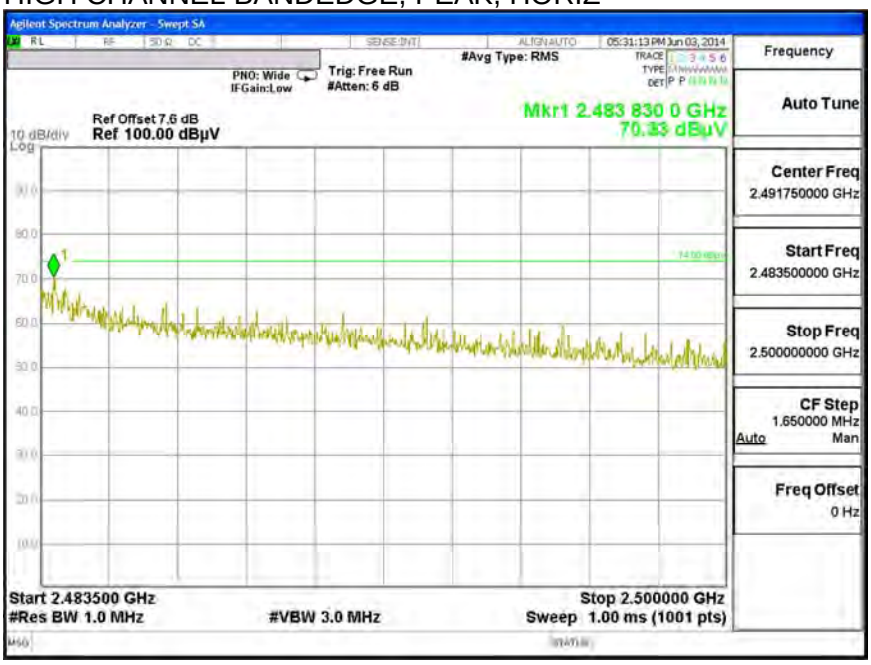
LOW CHANNEL RESTRICTED, PEAK, VERT



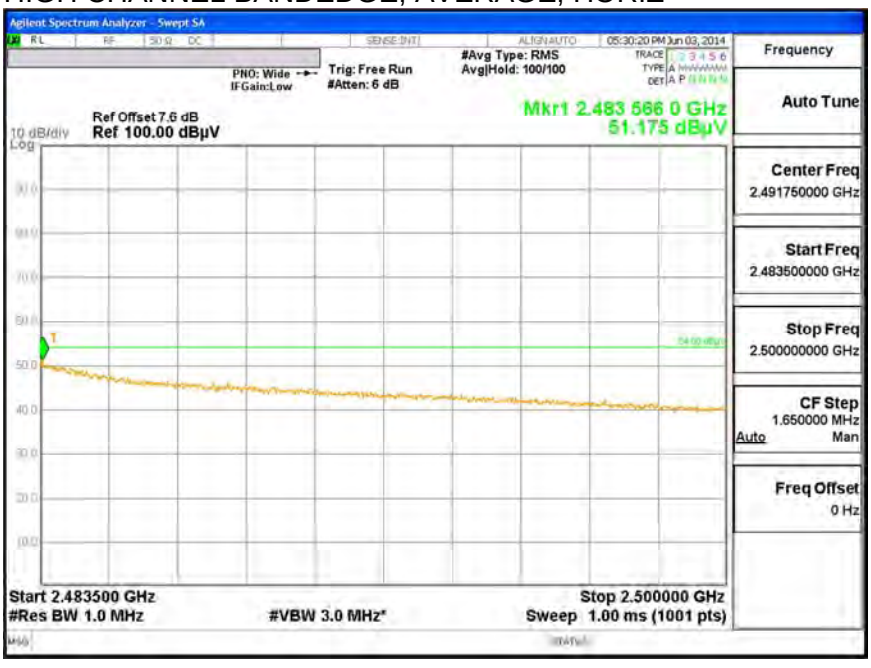
LOW CHANNEL RESTRICTED, AVERAGE, VERT

RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 11)

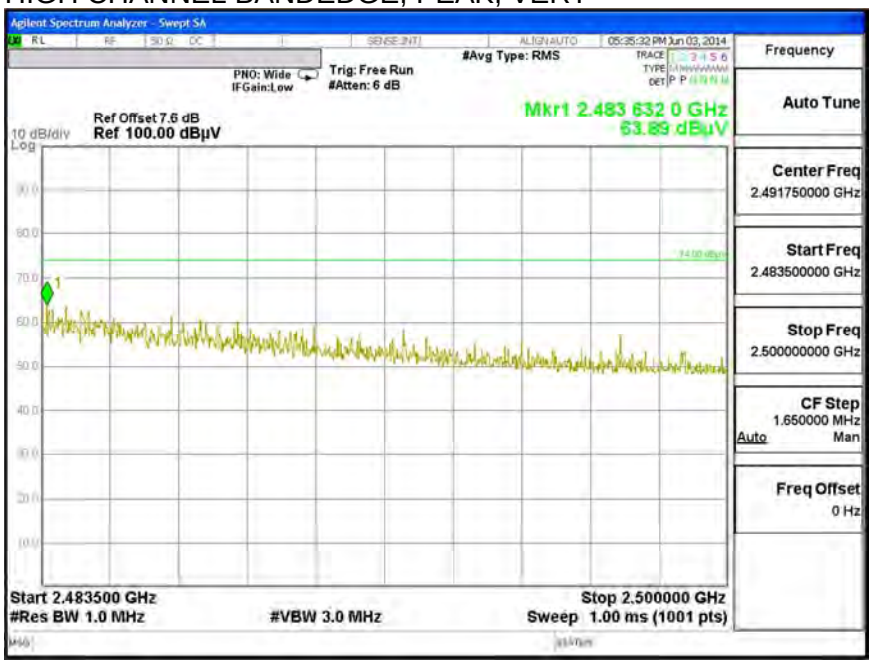
HIGH CHANNEL BANDEDGE, PEAK, HORIZ



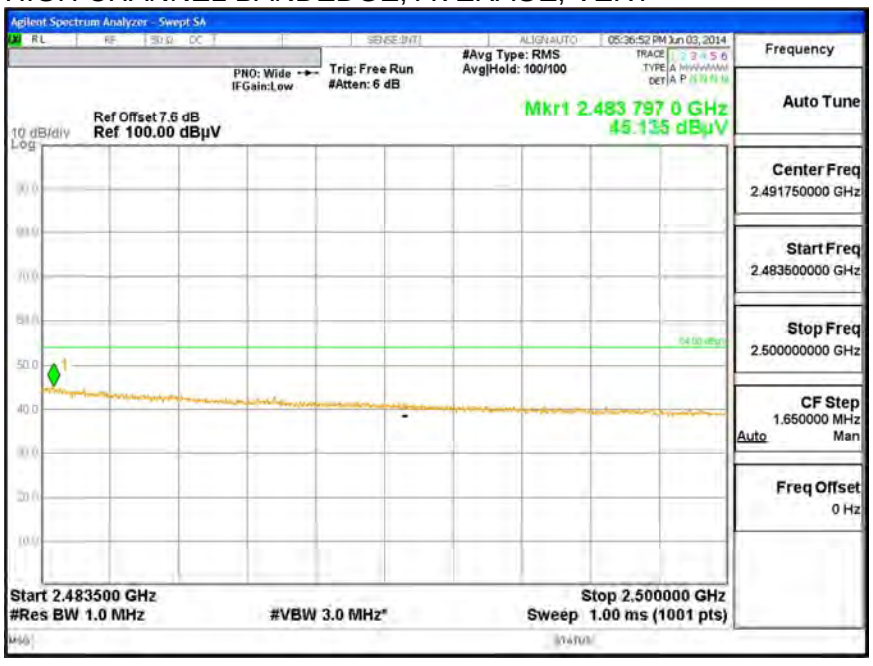
HIGH CHANNEL BANDEDGE, AVERAGE, HORIZ



HIGH CHANNEL BANDEDGE, PEAK, VERT

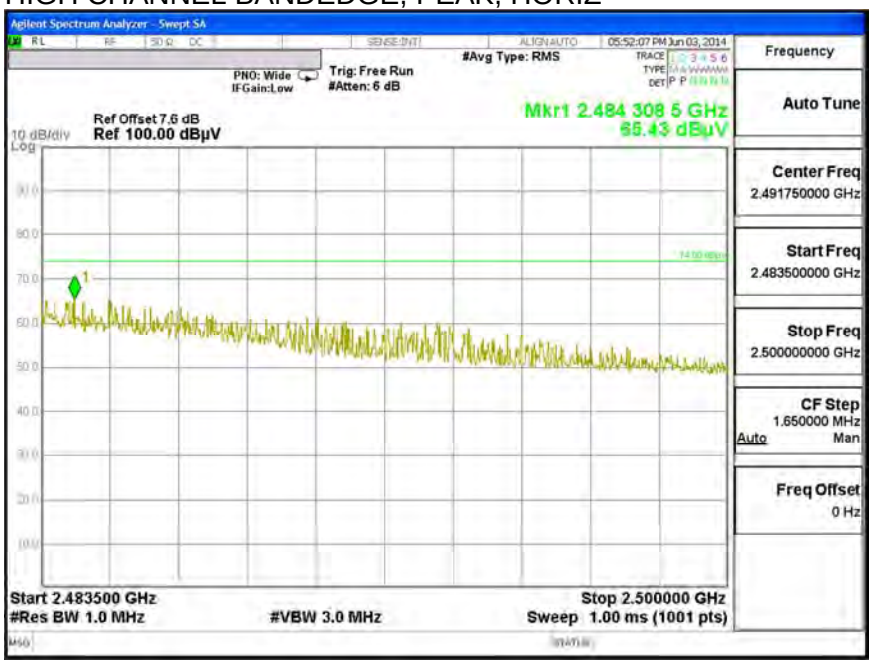


HIGH CHANNEL BANDEDGE, AVERAGE, VERT



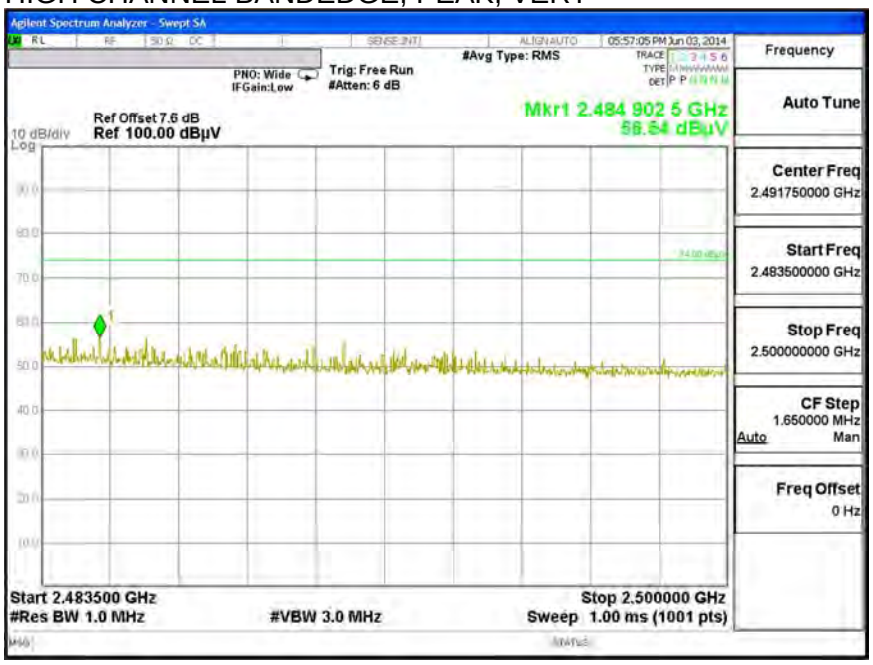
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 12)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ

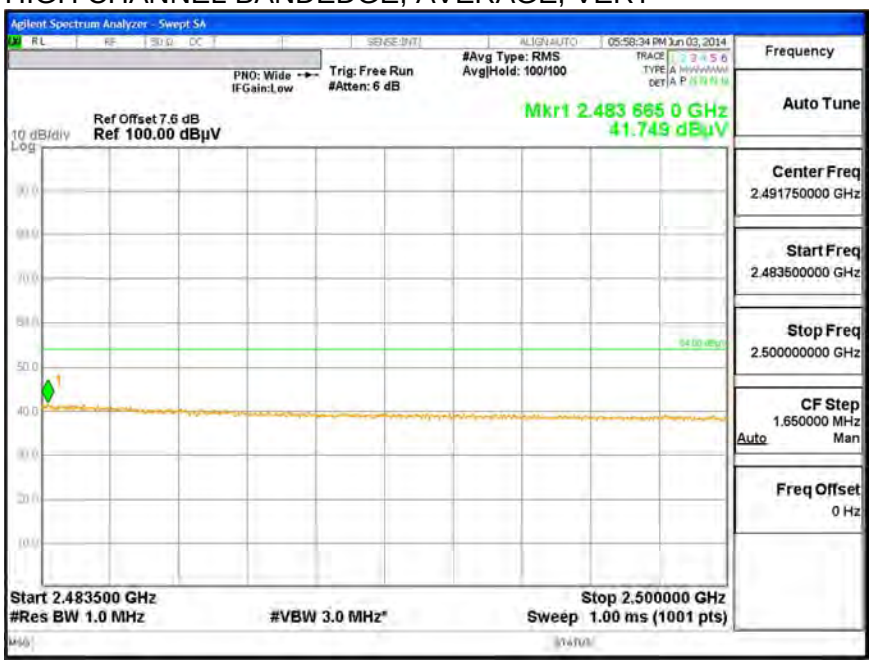


HIGH CHANNEL BANDEDGE, AVERAGE, HORIZ

HIGH CHANNEL BANDEDGE, PEAK, VERT

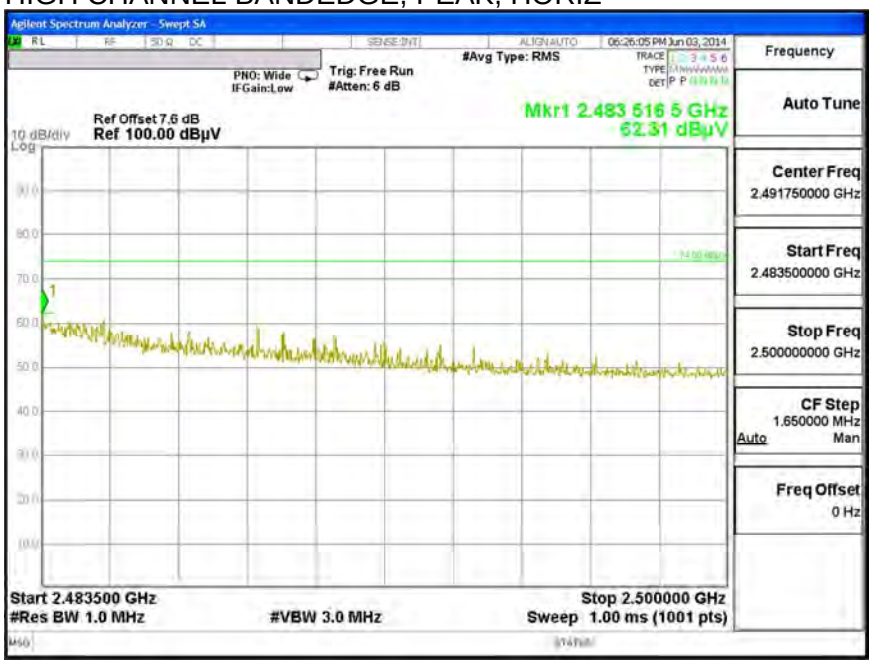


HIGH CHANNEL BANDEDGE, AVERAGE, VERT

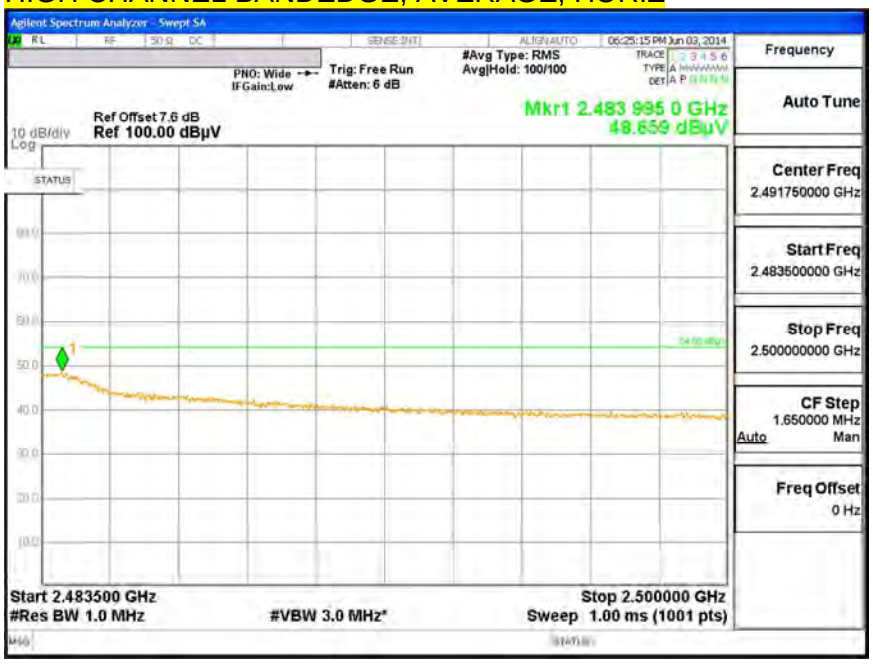


RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 13)

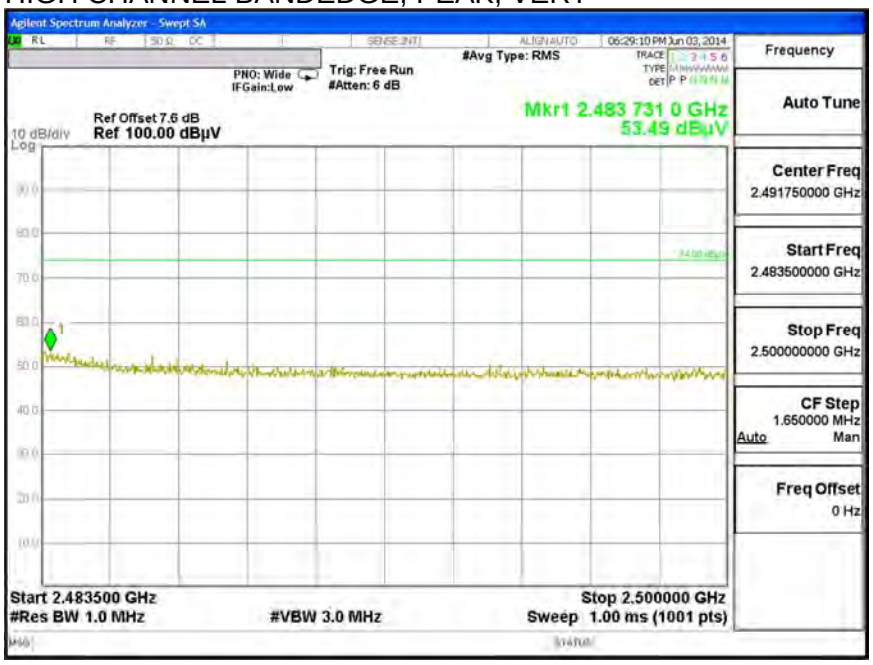
HIGH CHANNEL BANDEDGE, PEAK, HORIZ



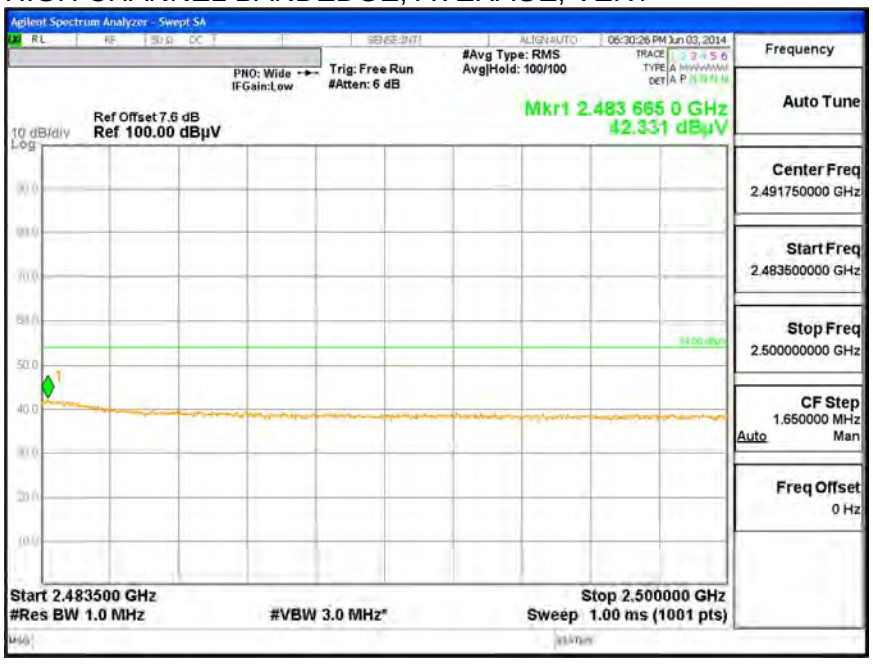
HIGH CHANNEL BANDEDGE, AVERAGE, HORIZ



HIGH CHANNEL BANDEDGE, PEAK, VERT

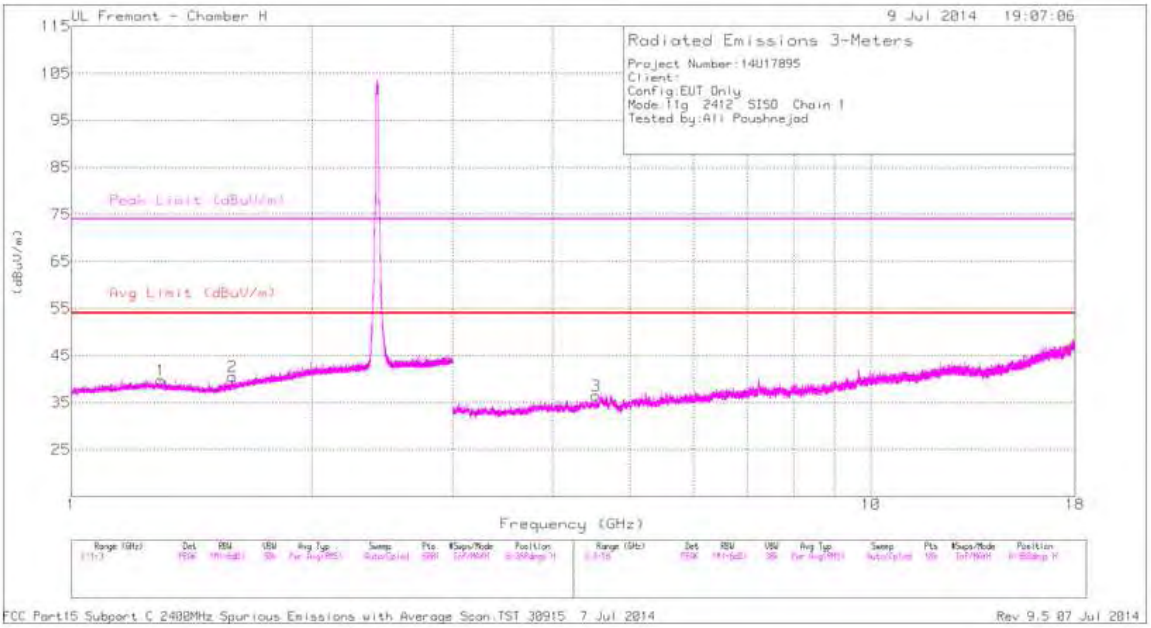


HIGH CHANNEL BANDEDGE, AVERAGE, VERT

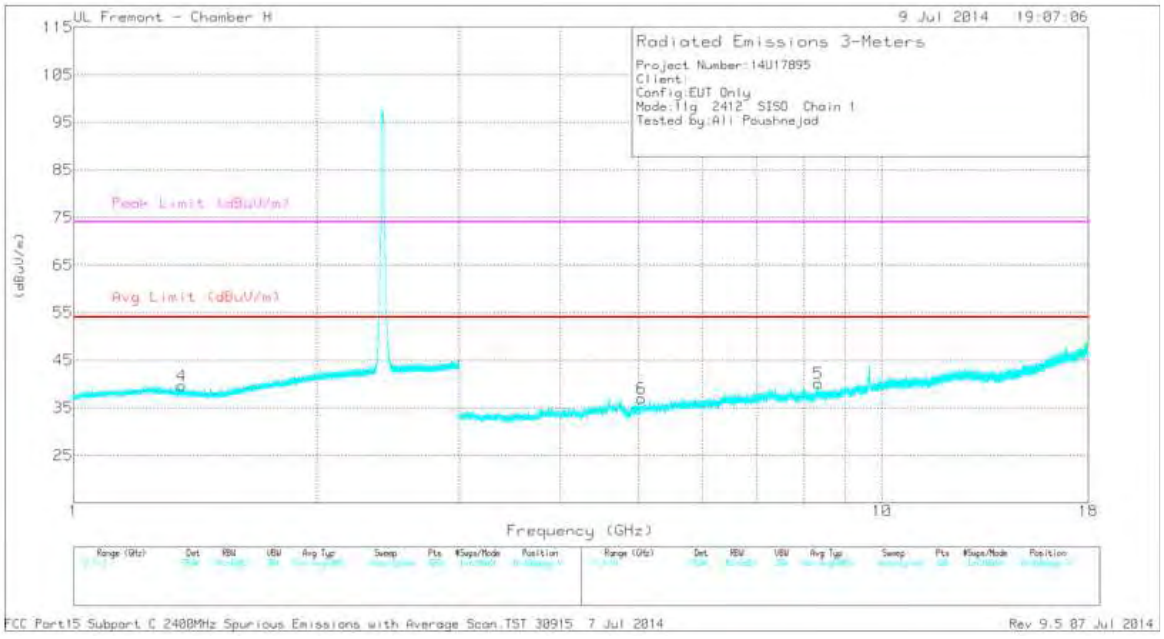


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 1



LOW CHANNEL VERTICAL PLOT, CH 1



DATA

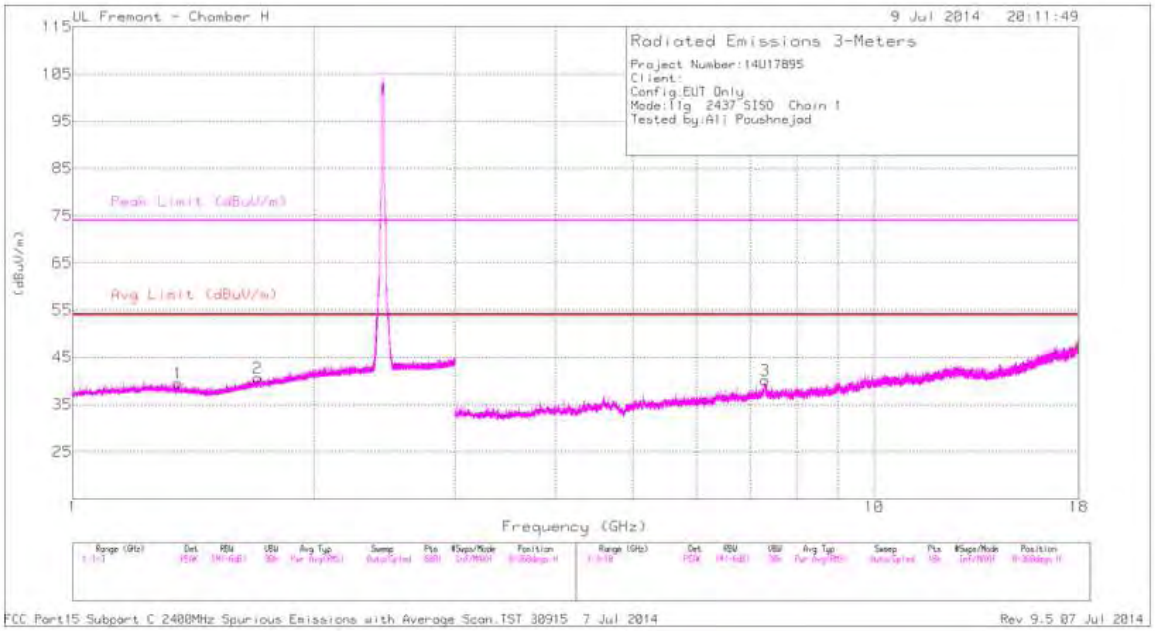
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.354	44.08	PK2	28.5	-25.7	46.88	-	-	74	-27.12	92	105	H
	* 1.355	32.1	MAv1	28.5	-25.7	34.9	54	-19.1	-	-	92	105	H
2	* 1.702	43.88	PK2	29.3	-25	48.18	-	-	74	-25.82	27	201	H
	* 1.701	31.71	MAv1	29.3	-25	36.01	54	-17.99	-	-	27	201	H
3	* 7.312	42.57	PK2	36.2	-29.1	49.67	-	-	74	-24.33	48	202	H
	* 7.31	30.14	MAv1	36.2	-29.1	37.24	54	-16.76	-	-	48	202	H
5	* 4.609	41.94	PK2	34.1	-32.5	43.54	-	-	74	-30.46	248	135	V
	* 4.61	30.72	MAv1	34.1	-32.4	32.42	54	-21.58	-	-	248	135	V
6	* 7.275	39.54	PK2	36.2	-29.5	46.24	-	-	74	-27.76	56	386	V
	* 7.273	28.04	MAv1	36.2	-29.6	34.64	54	-19.36	-	-	56	386	V
4	2.111	31.73	MAv1	31.5	-24.9	38.33	-	-	-	-	307	197	V
	2.114	43.15	PK2	31.5	-24.9	49.75	-	-	-	-	307	197	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

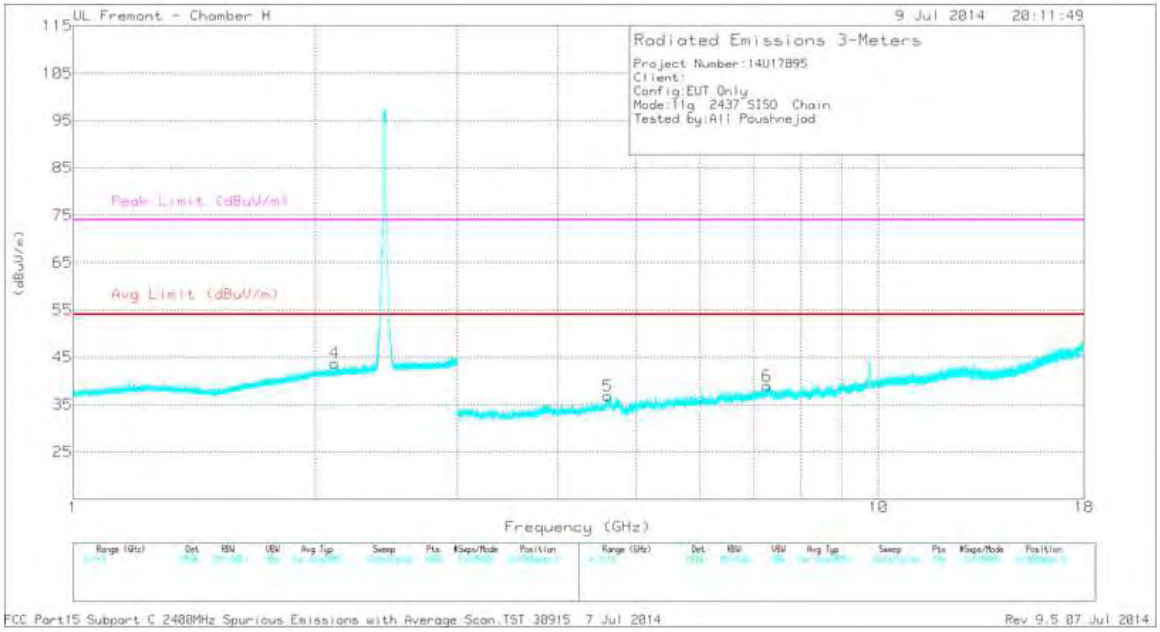
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL PLOT, CH 6



MID CHANNEL VERTICAL PLOT, CH 6



DATA

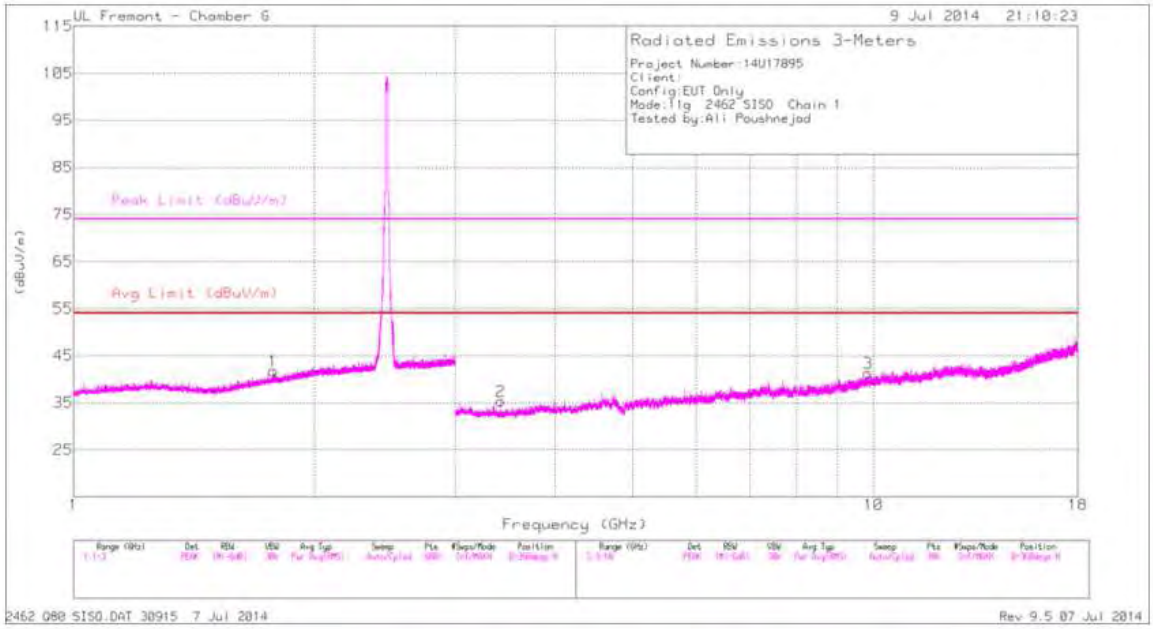
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.354	44.08	PK2	28.5	-25.7	46.88	-	-	74	-27.12	92	105	H
	* 1.355	32.1	MAv1	28.5	-25.7	34.9	54	-19.1	-	-	92	105	H
2	* 1.702	43.88	PK2	29.3	-25	48.18	-	-	74	-25.82	27	201	H
	* 1.701	31.71	MAv1	29.3	-25	36.01	54	-17.99	-	-	27	201	H
3	* 7.312	42.57	PK2	36.2	-29.1	49.67	-	-	74	-24.33	48	202	H
	* 7.31	30.14	MAv1	36.2	-29.1	37.24	54	-16.76	-	-	48	202	H
5	* 4.609	41.94	PK2	34.1	-32.5	43.54	-	-	74	-30.46	248	135	V
	* 4.61	30.72	MAv1	34.1	-32.4	32.42	54	-21.58	-	-	248	135	V
6	* 7.275	39.54	PK2	36.2	-29.5	46.24	-	-	74	-27.76	56	386	V
	* 7.273	28.04	MAv1	36.2	-29.6	34.64	54	-19.36	-	-	56	386	V
4	2.111	31.73	MAv1	31.5	-24.9	38.33	-	-	-	-	307	197	V
	2.114	43.15	PK2	31.5	-24.9	49.75	-	-	-	-	307	197	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

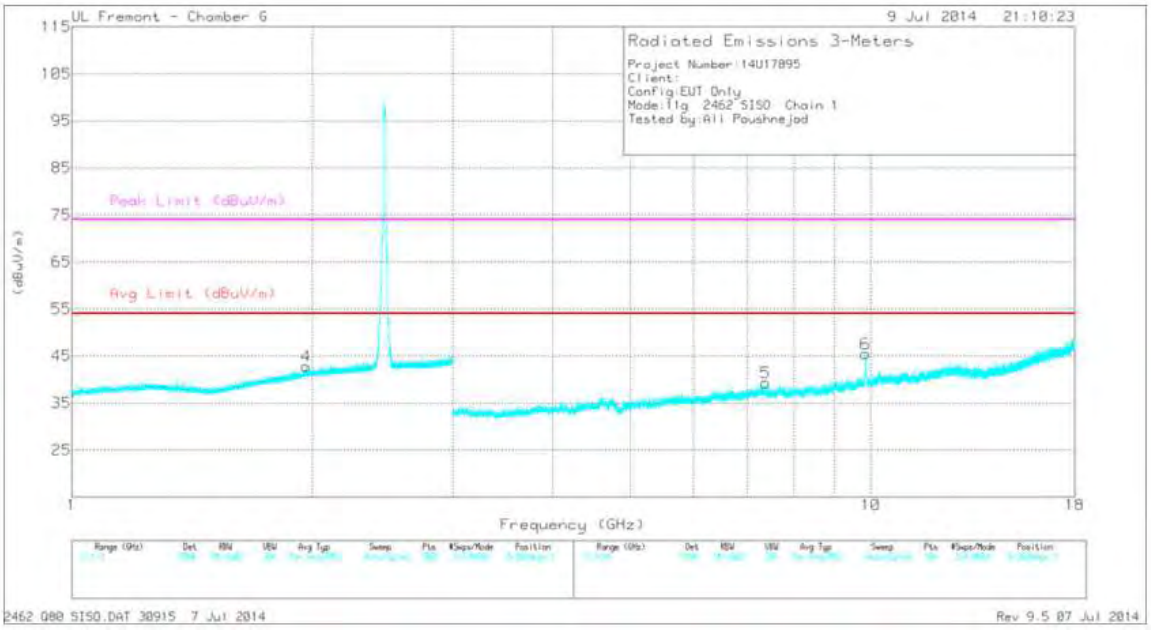
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 11



HIGH CHANNEL VERTICAL PLOT, CH 11



DATA

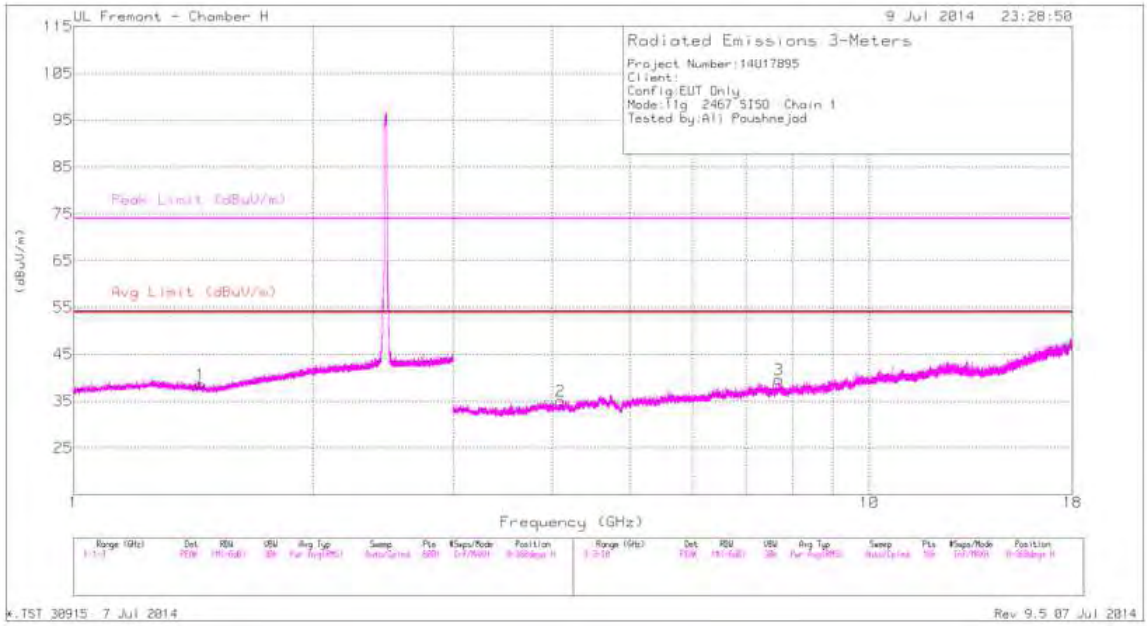
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
*5	* 7.696	39	PK2	36.1	-28.6	46.5	-	-	74	-27.5	340	382	H
	* 7.698	27.59	MAv1	36.1	-28.5	35.19	54	-18.81	-	-	340	382	H
1	1.777	43.57	PK2	29.9	-25.1	48.37	-	-	-	-	3	220	H
	1.778	31.83	MAv1	29.9	-25.1	36.63	-	-	-	-	3	220	H
*4	* 1.413	43.77	PK2	28.2	-25.5	46.47	-	-	74	-27.53	3	100	V
	* 1.414	32.55	MAv1	28.1	-25.5	35.15	54	-18.85	-	-	3	100	V
*2	* 4.641	41.26	PK2	34.2	-31.8	43.66	-	-	74	-30.34	88	254	H
	* 4.639	29.78	MAv1	34.2	-31.8	32.18	54	-21.82	-	-	88	254	H
3	9.294	29.68	MAv1	34.8	-32.2	32.28	-	-	-	-	43	236	H
	9.295	41.51	PK2	34.8	-32.2	44.11	-	-	-	-	43	236	H
6	9.736	41.51	PK2	34.3	-32	43.81	-	-	74	-30.19	313	193	V
	9.734	30.07	MAv1	34.3	-32	32.37	54	-21.63	-	-	313	193	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

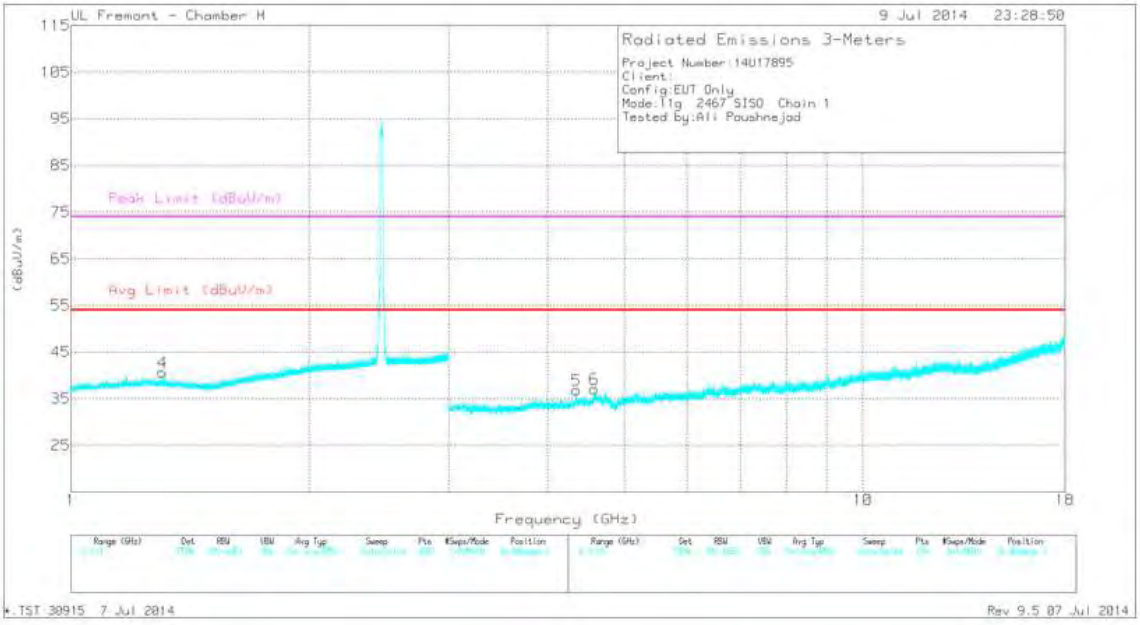
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 12



HIGH CHANNEL VERTICAL PLOT, CH 12



DATA

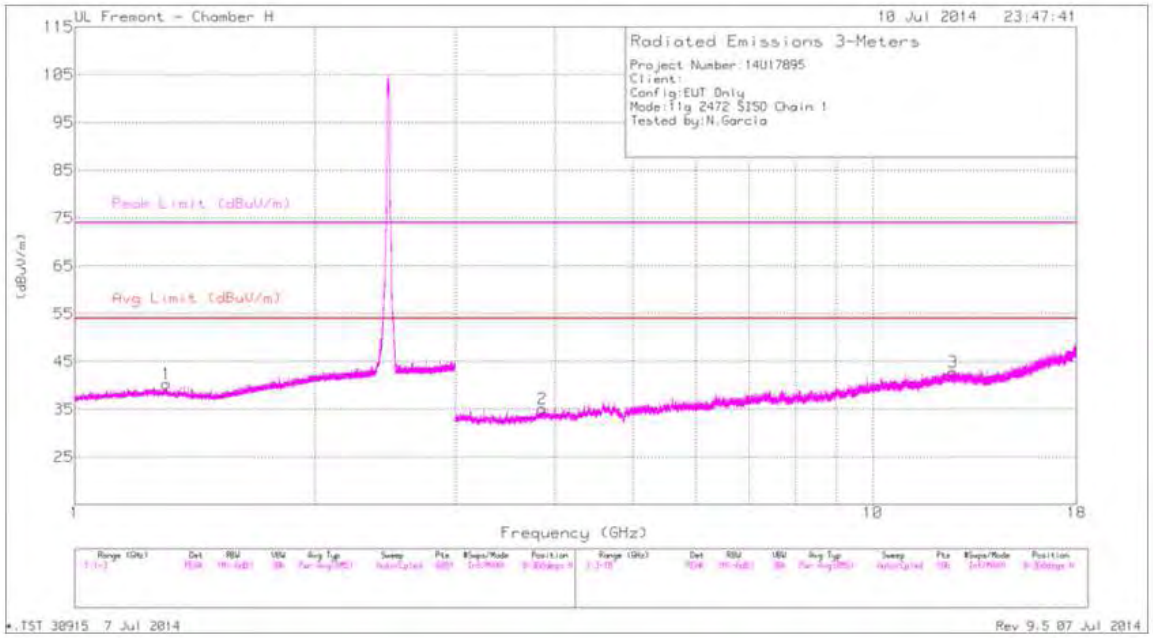
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.444	43.97	PK2	28	-25.5	46.47	-	-	74	-27.53	0	202	H
	* 1.447	32.39	MAv1	28	-25.5	34.89	54	-19.11	-	-	0	202	H
4	* 1.308	43.77	PK2	28.7	-25.8	46.67	-	-	74	-27.33	12	100	V
	* 1.307	32.63	MAv1	28.7	-25.8	35.53	54	-18.47	-	-	12	100	V
2	* 4.097	40.65	PK2	33.5	-31.9	42.25	-	-	74	-31.75	338	337	H
	* 4.097	29.58	MAv1	33.5	-31.9	31.18	54	-22.82	-	-	338	337	H
3	* 7.699	38.79	PK2	36.1	-28.5	46.39	-	-	74	-27.61	240	333	H
	* 7.696	27.56	MAv1	36.1	-28.6	35.06	54	-18.94	-	-	240	333	H
5	* 4.349	42.24	PK2	33.7	-32	43.94	-	-	74	-30.06	5	128	V
	* 4.349	30.08	MAv1	33.7	-32	31.78	54	-22.22	-	-	5	128	V
6	* 4.641	41.26	PK2	34.2	-31.8	43.66	-	-	74	-30.34	88	254	V
	* 4.639	29.78	MAv1	34.2	-31.8	32.18	54	-21.82	-	-	88	254	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

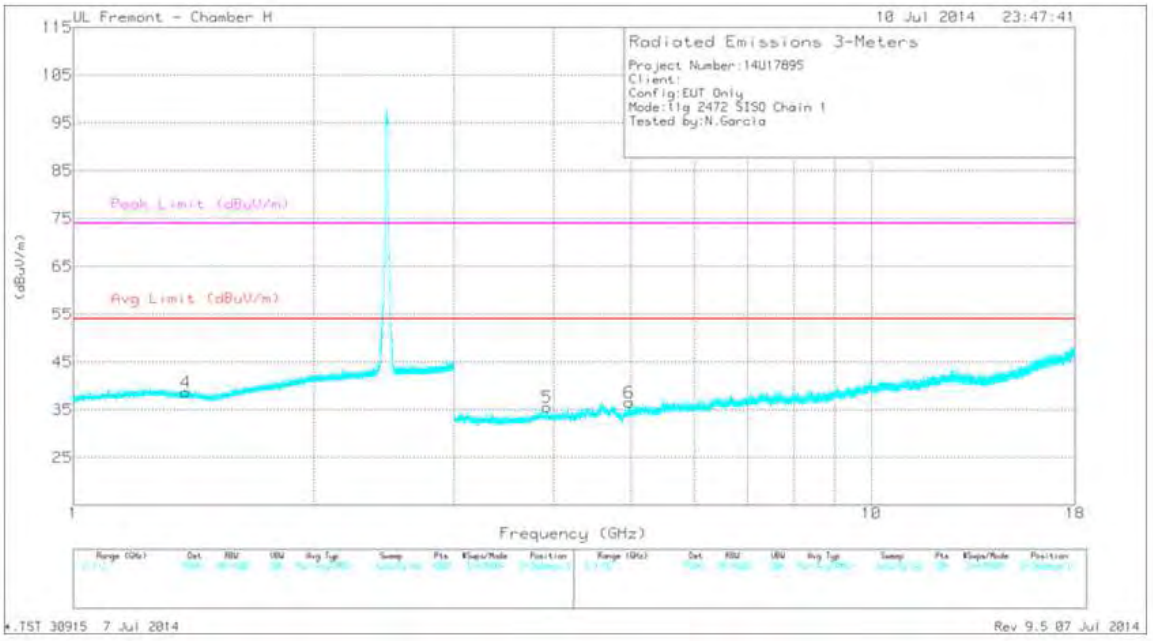
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 13



HIGH CHANNEL VERTICAL PLOT, CH 13



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.302	44.1	PK2	28.7	-25.8	47	-	-	74	-27	173	202	H
	* 1.303	32.8	MAv1	28.7	-25.8	35.7	54	-18.3	-	-	173	202	H
4	* 1.382	43.83	PK2	28.3	-25.6	46.53	-	-	74	-27.47	189	105	V
	* 1.384	32.43	MAv1	28.3	-25.6	35.13	54	-18.87	-	-	189	105	V
2	* 3.856	42.6	PK2	33.3	-32.4	43.5	-	-	74	-30.5	203	217	H
	* 3.859	30.97	MAv1	33.3	-32.5	31.77	54	-22.23	-	-	203	217	H
3	* 12.594	36.19	PK2	39.2	-25.2	50.19	-	-	74	-23.81	206	105	H
	* 12.595	25.69	MAv1	39.2	-25.2	39.69	54	-14.31	-	-	206	105	H
5	* 3.922	42.57	PK2	33.4	-33	42.97	-	-	74	-31.03	212	256	V
	* 3.923	31.47	MAv1	33.4	-33.1	31.77	54	-22.23	-	-	212	256	V
6	* 4.973	40.31	PK2	34.3	-31.8	42.81	-	-	74	-31.19	212	100	V
	* 4.97	29.74	MAv1	34.3	-31.9	32.14	54	-21.86	-	-	212	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

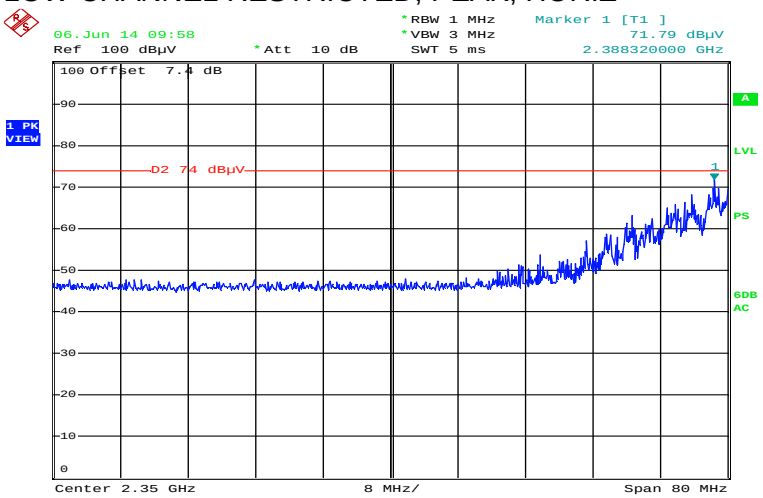
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

10.2.3.802.11n HT20 2Tx MODE IN THE 2.4 GHz BAND

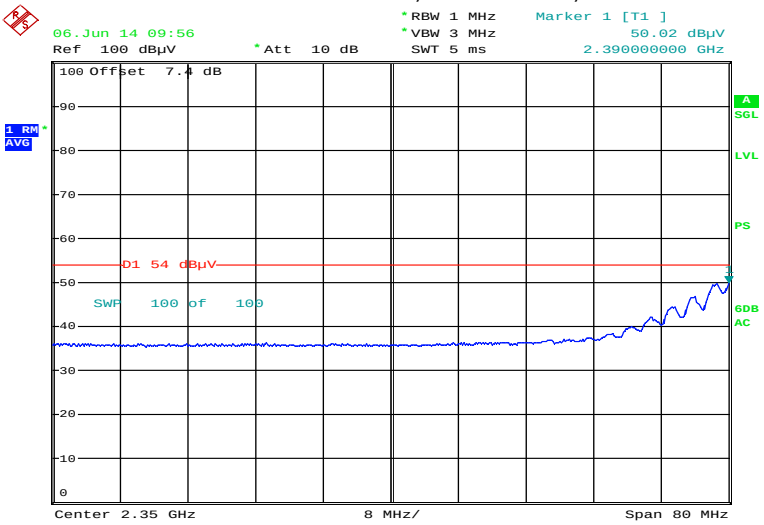
RESTRICTED BANDEDGE (LOW CHANNEL, CHANNEL 1)

LOW CHANNEL RESTRICTED, PEAK, HORIZ



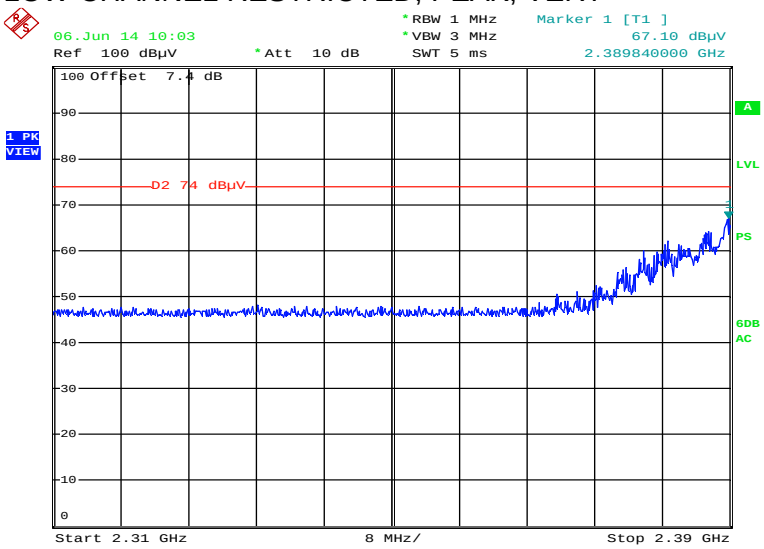
Date: 6.JUN.2014 09:58:48

LOW CHANNEL RESTRICTED, AVERAGE, HORIZ



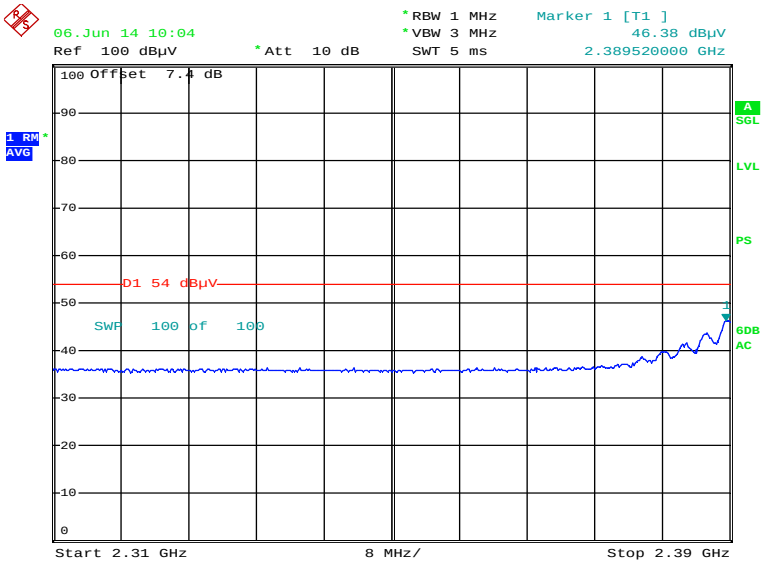
Date: 6.JUN.2014 09:56:19

LOW CHANNEL RESTRICTED, PEAK, VERT



Date: 6.JUN.2014 10:03:52

LOW CHANNEL RESTRICTED, AVERAGE, VERT



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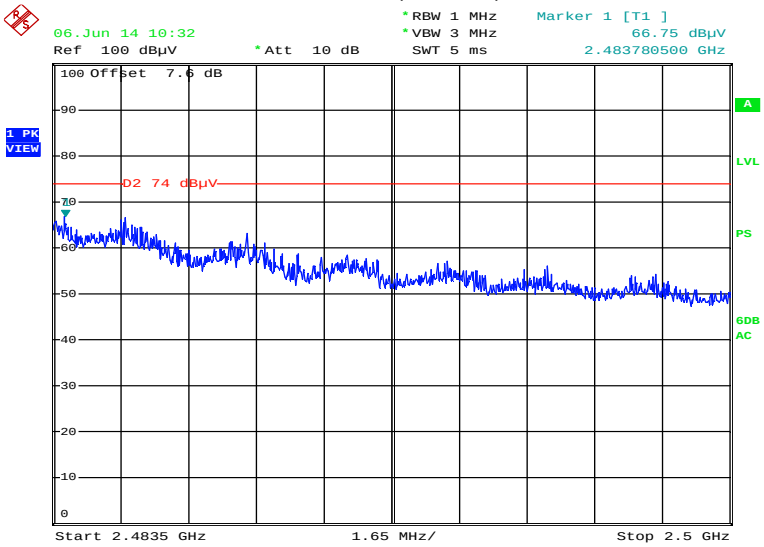
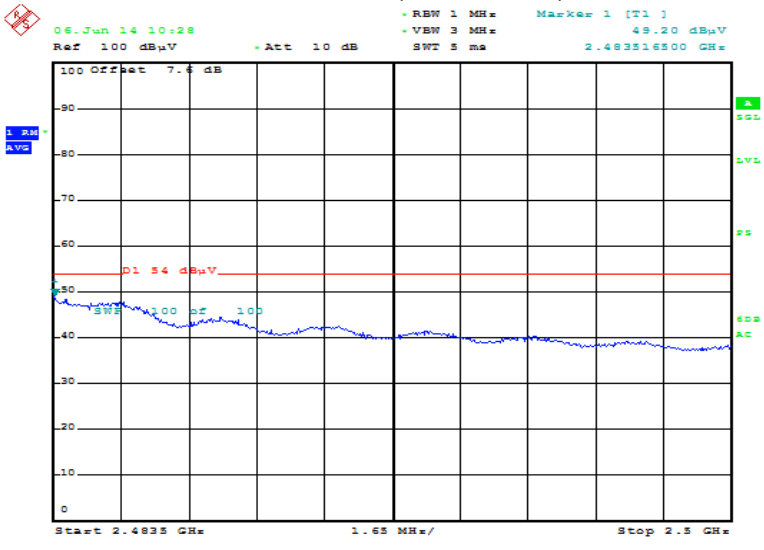
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 11)

HIGH CHANNEL BANDEDGE, PEAK, HORIZ



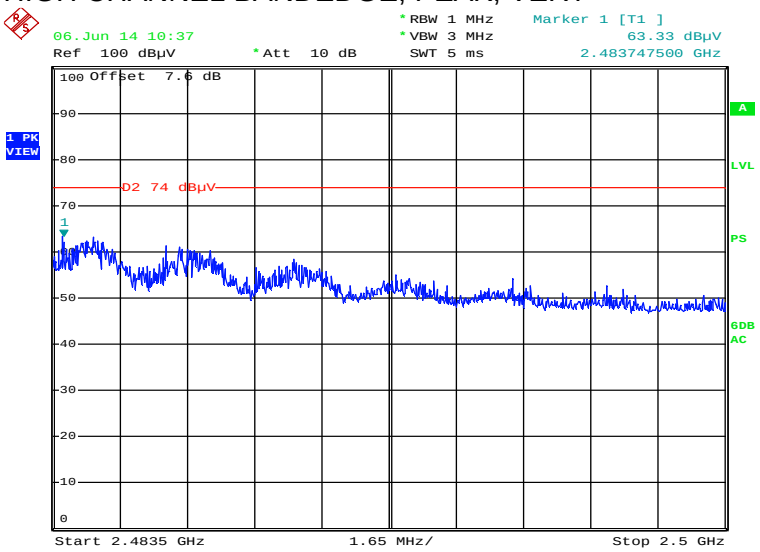
Date: 6.JUN.2014 10:32:27

HIGH CHANNEL BANDEDGE, AVERAGE, HORIZ



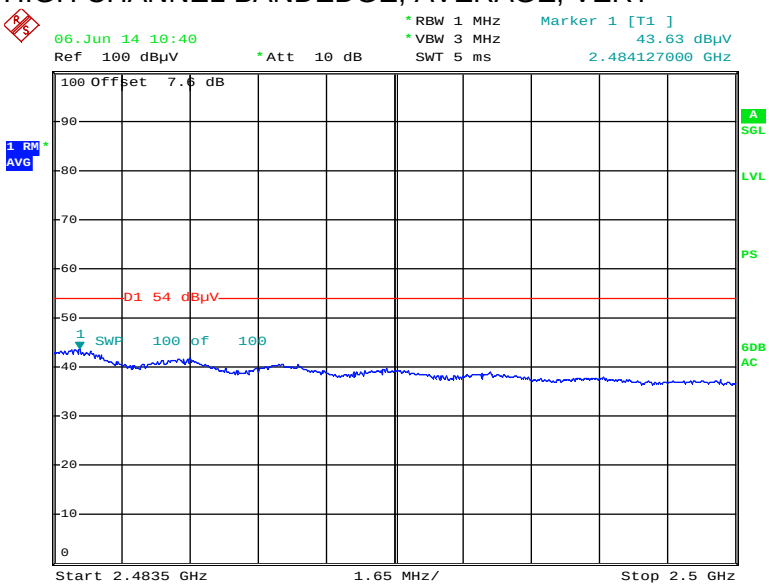
Date: 6.JUN.2014 10:28:12

HIGH CHANNEL BANDEDGE, PEAK, VERT



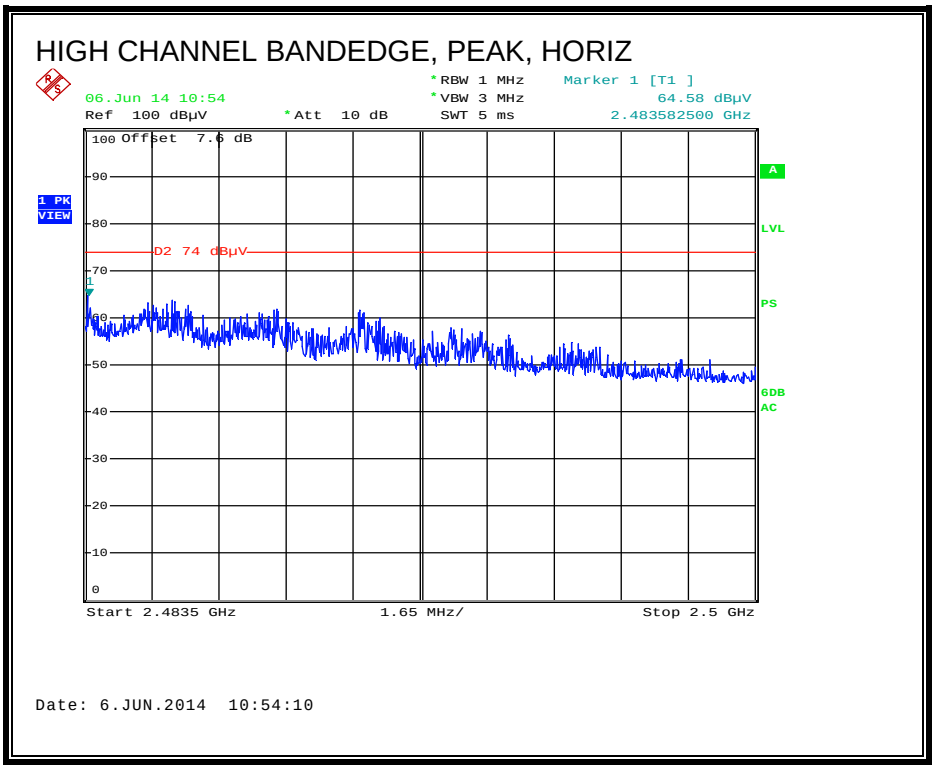
Date: 6.JUN.2014 10:37:34

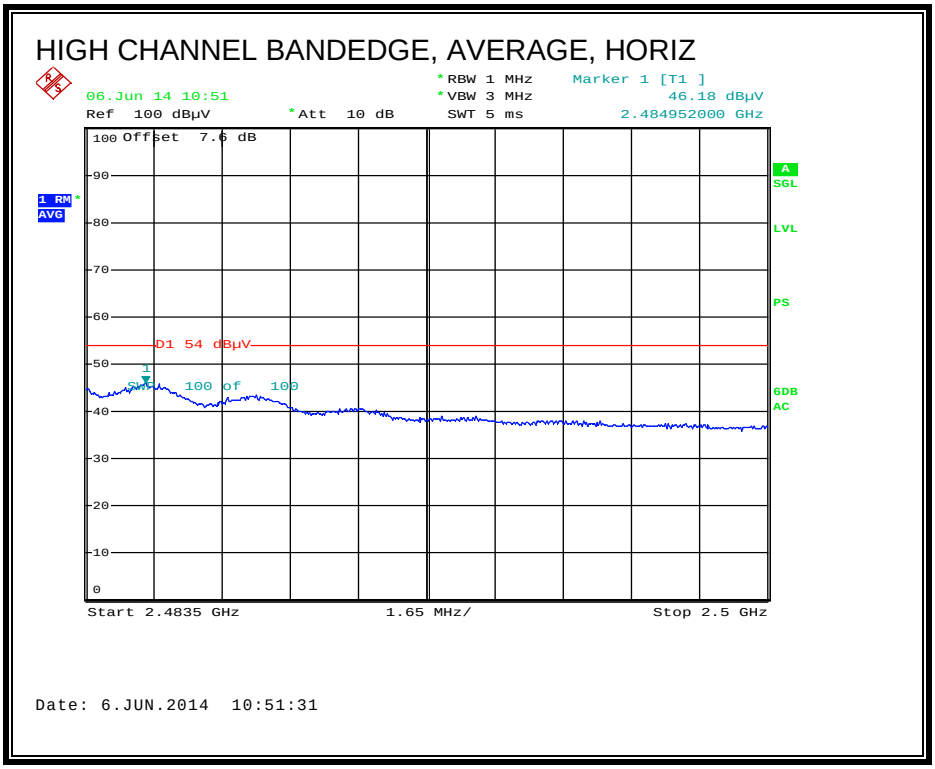
HIGH CHANNEL BANDEDGE, AVERAGE, VERT



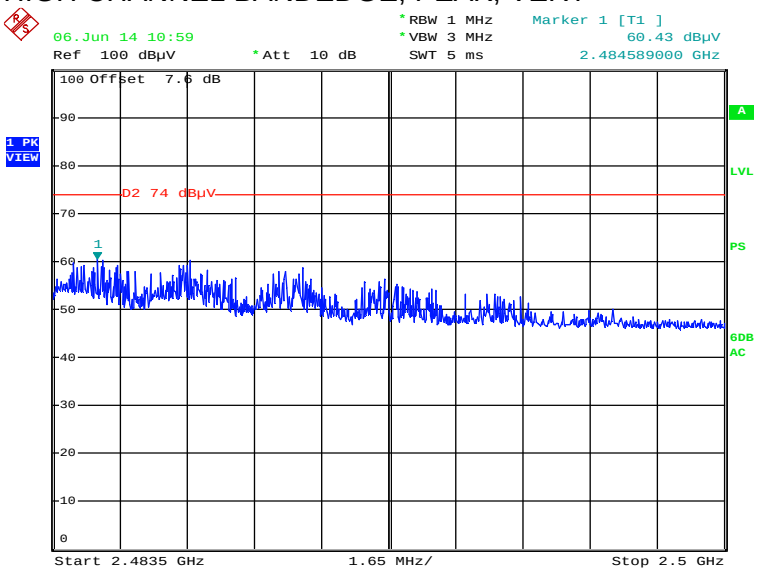
Date: 6.JUN.2014 10:40:21

RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 12)



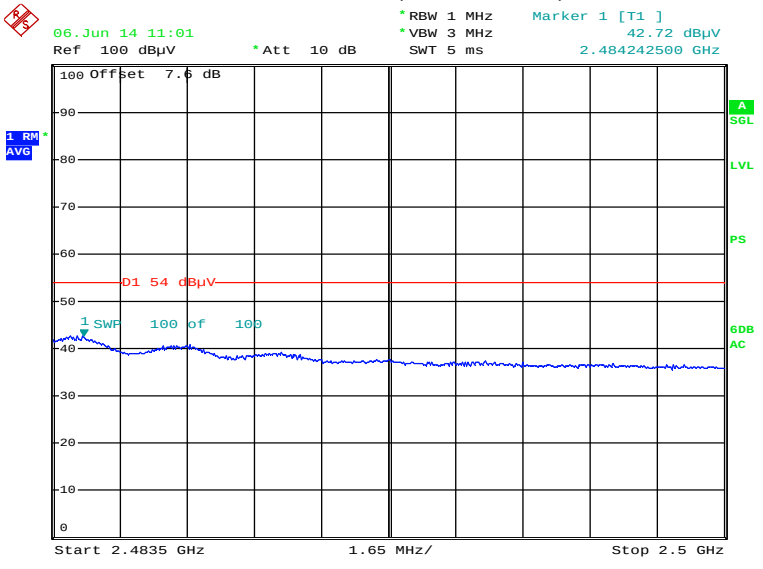


HIGH CHANNEL BANDEDGE, PEAK, VERT



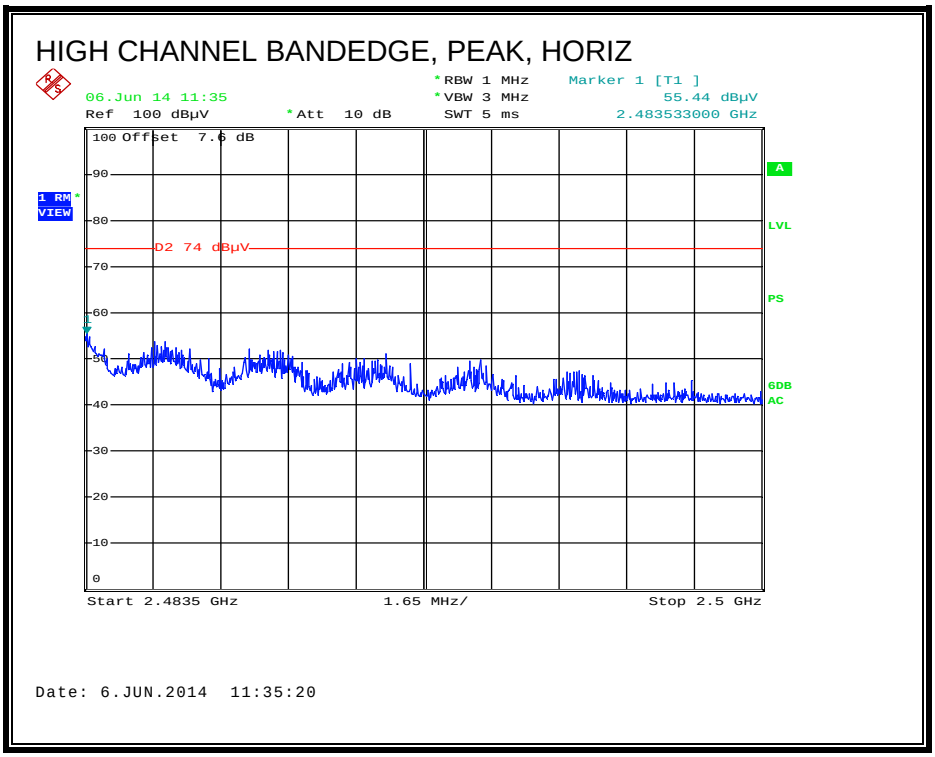
Date: 6.JUN.2014 10:59:27

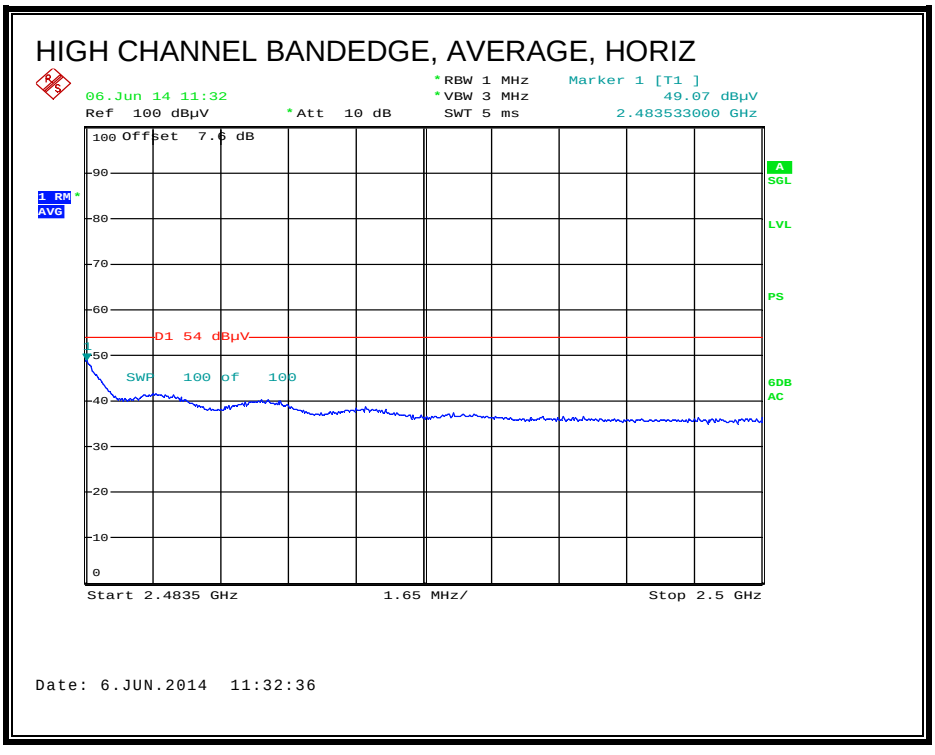
HIGH CHANNEL BANDEDGE, AVERAGE, VERT



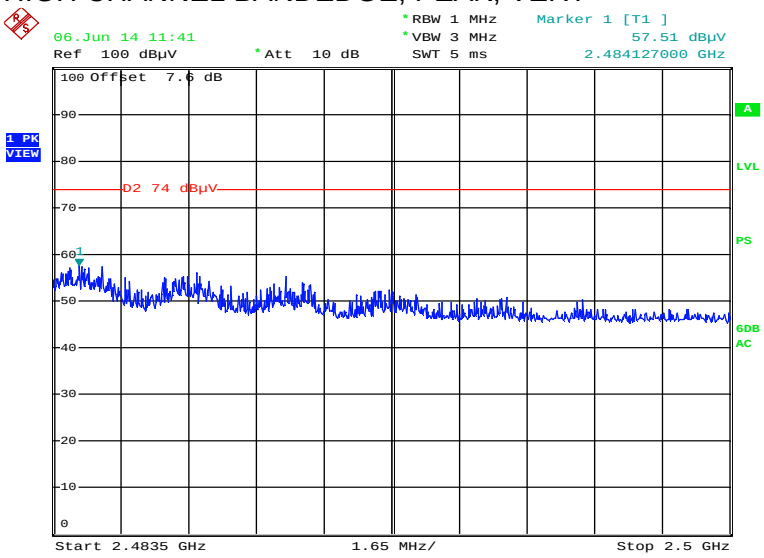
Date: 6.JUN.2014 11:01:02

RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 13)



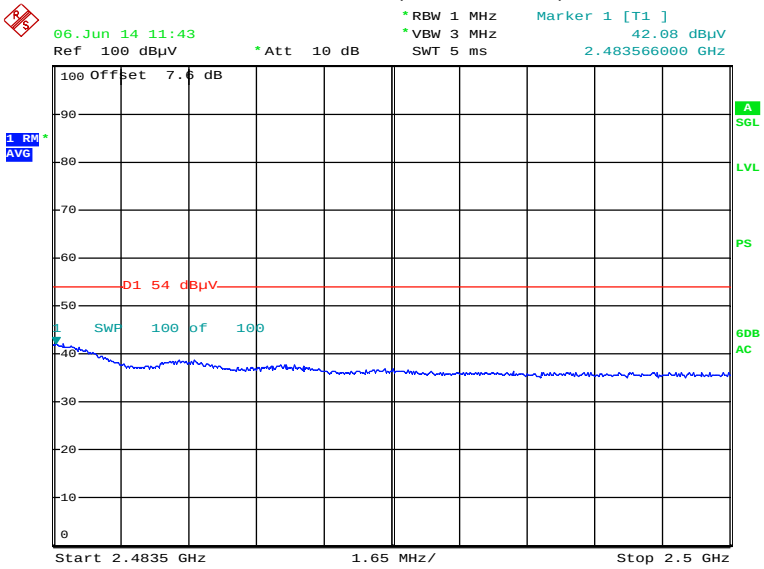


HIGH CHANNEL BANDEDGE, PEAK, VERT



Date: 6.JUN.2014 11:41:45

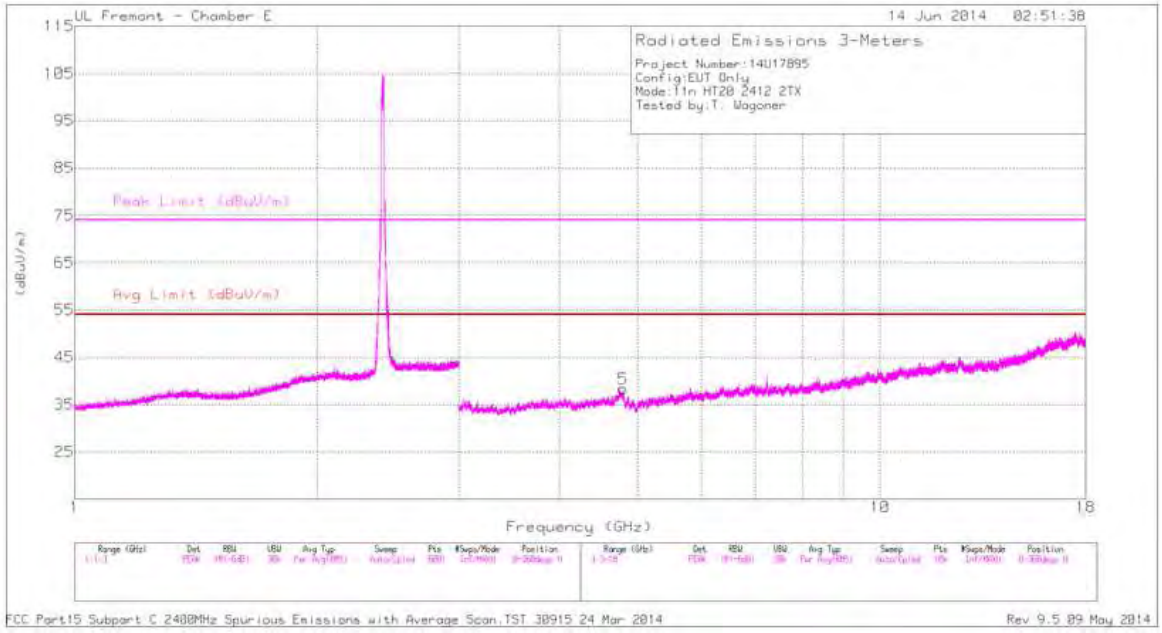
HIGH CHANNEL BANDEDGE, AVERAGE, VERT



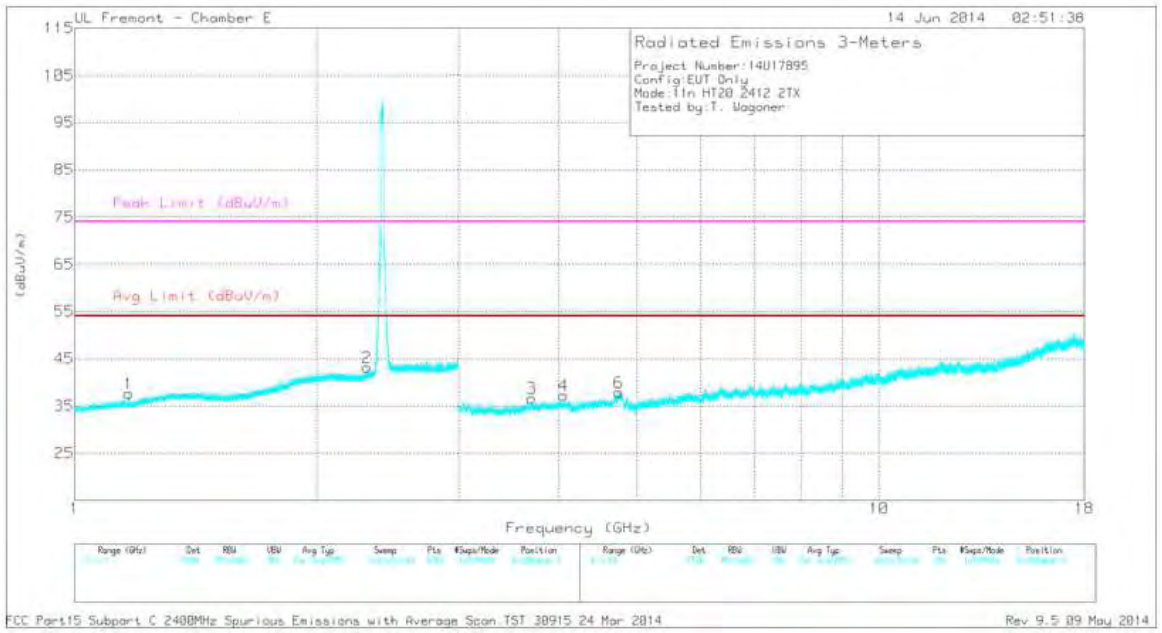
Date: 6.JUN.2014 11:43:25

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 1



LOW CHANNEL VERTICAL PLOT, CH 1



DATA

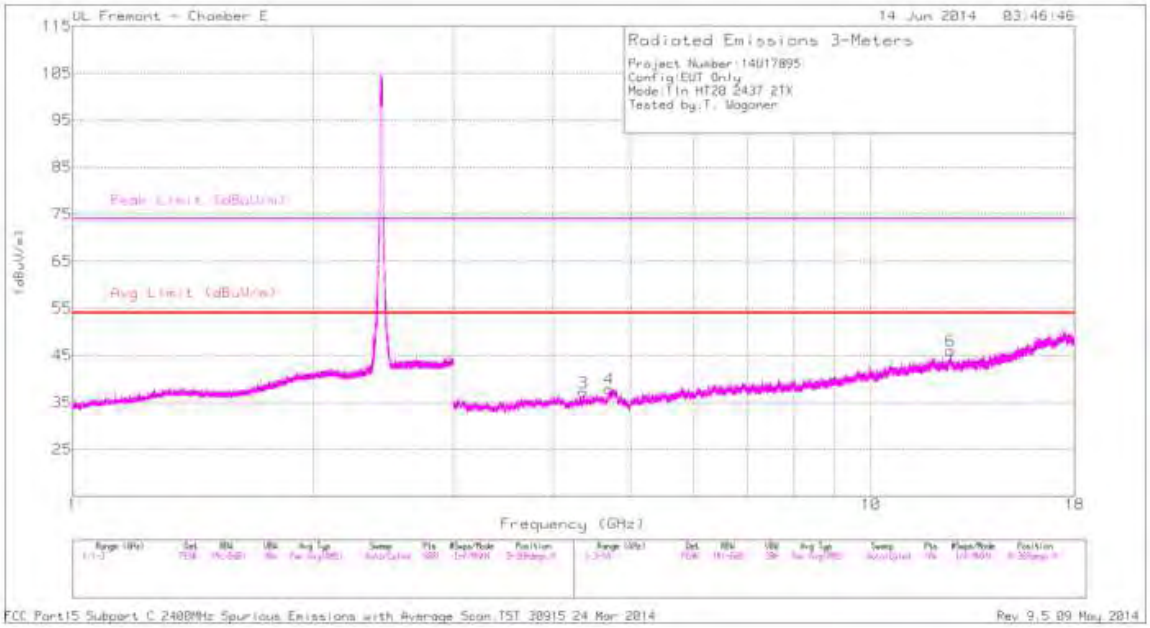
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.165	39.22	PK2	27.8	-27.7	39.32	-	-	74	-34.68	271	300	V
	* 1.164	32.69	MAv1	27.8	-27.7	32.79	54	-21.21	-	-	271	300	V
2	* 2.311	38.66	PK2	31.5	-25	45.16	-	-	74	-28.84	164	162	V
	* 2.313	31.96	MAv1	31.5	-25	38.46	54	-15.54	-	-	164	162	V
5	* 4.8	37.31	PK2	34.1	-30.9	40.51	-	-	74	-33.49	293	365	H
	* 4.8	30.47	MAv1	34.1	-30.9	33.67	54	-20.33	-	-	293	365	H
3	* 3.699	36.8	PK2	33.3	-30.6	39.5	-	-	74	-34.5	7	253	V
	* 3.699	29.88	MAv1	33.3	-30.6	32.58	54	-21.42	-	-	7	253	V
4	* 4.055	36.56	PK2	33.5	-30.5	39.56	-	-	74	-34.44	139	222	V
	* 4.054	29.53	MAv1	33.5	-30.5	32.53	54	-21.47	-	-	139	222	V
6	* 4.746	37.77	PK2	34.1	-30.8	41.07	-	-	74	-32.93	300	125	V
	* 4.747	30.88	MAv1	34.1	-30.8	34.18	54	-19.82	-	-	300	125	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

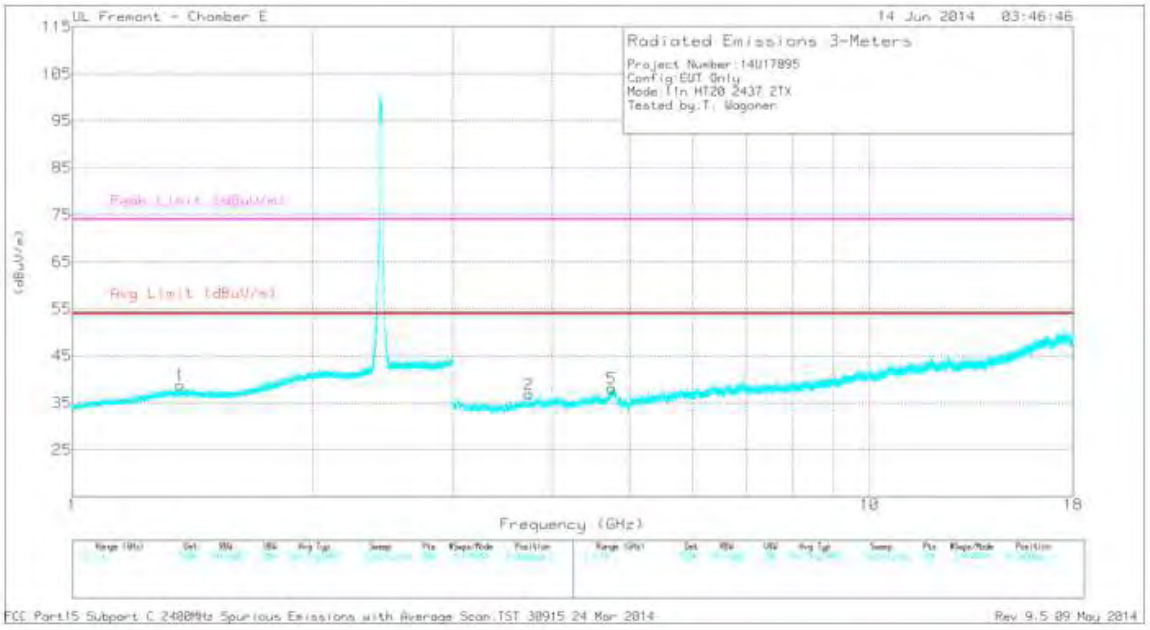
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL PLOT, CH 6



MID CHANNEL VERTICAL PLOT, CH 6



DATA

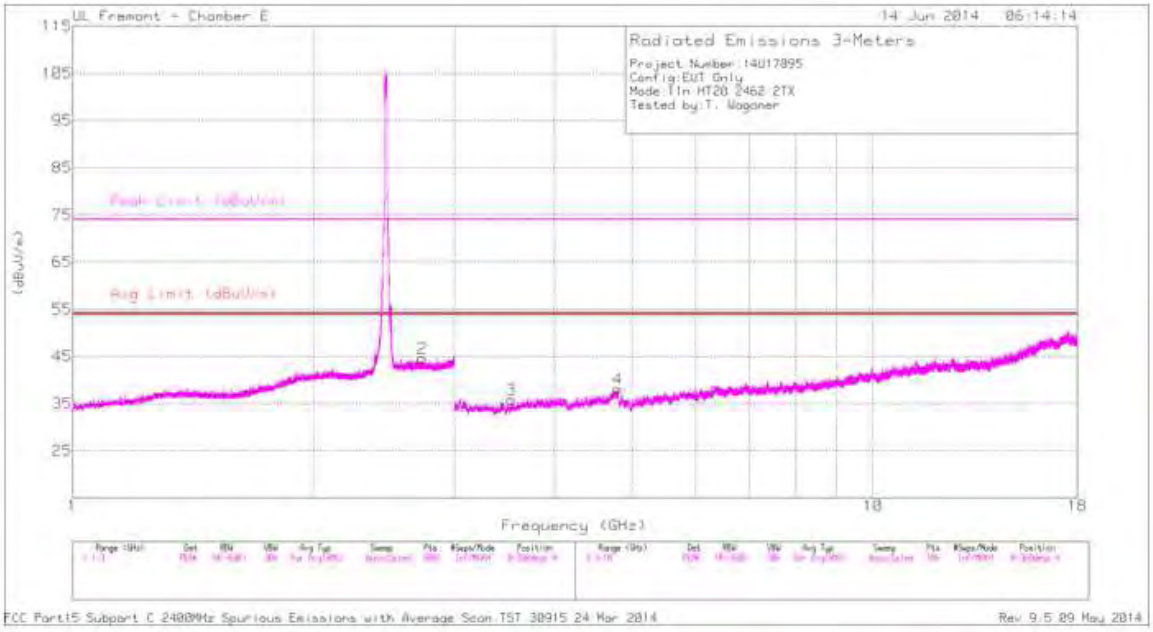
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.366	38.87	PK2	28.9	-26.6	41.17	-	-	74	-32.83	218	370	V
	* 1.366	32.25	MAv1	28.9	-26.6	34.55	54	-19.45	-	-	218	370	V
3	* 4.361	38.61	PK2	33.7	-30.3	42.01	-	-	74	-31.99	289	145	H
	* 4.362	31.78	MAv1	33.7	-30.3	35.18	54	-18.82	-	-	289	145	H
4	* 4.704	37.25	PK2	34.2	-30.4	41.05	-	-	74	-32.95	230	169	H
	* 4.703	30.2	MAv1	34.2	-30.4	34	54	-20	-	-	230	169	H
6	* 12.591	32.83	PK2	39	-23.6	48.23	-	-	74	-25.77	158	280	H
	* 12.591	25.82	MAv1	39	-23.6	41.22	54	-12.78	-	-	158	280	H
2	* 3.74	36.58	PK2	33.4	-30.7	39.28	-	-	74	-34.72	35	251	V
	* 3.741	29.69	MAv1	33.4	-30.7	32.39	54	-21.61	-	-	35	251	V
5	* 4.747	37.86	PK2	34.1	-30.8	41.16	-	-	74	-32.84	34	105	V
	* 4.747	30.88	MAv1	34.1	-30.8	34.18	54	-19.82	-	-	34	105	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

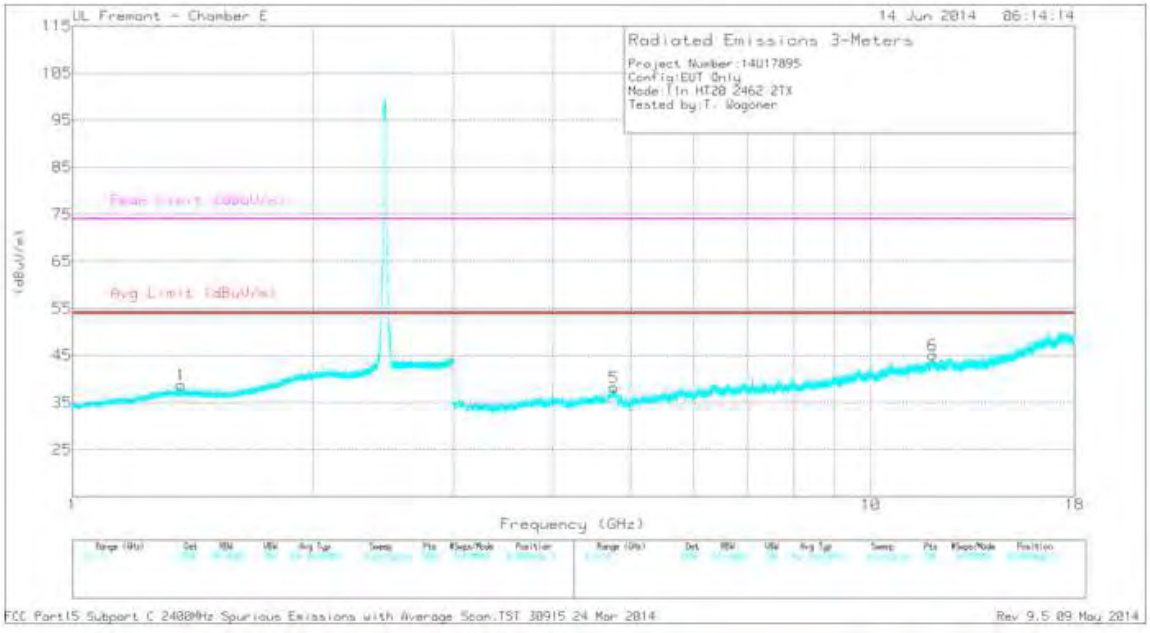
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 11



HIGH CHANNEL VERTICAL PLOT, CH 11



DATA

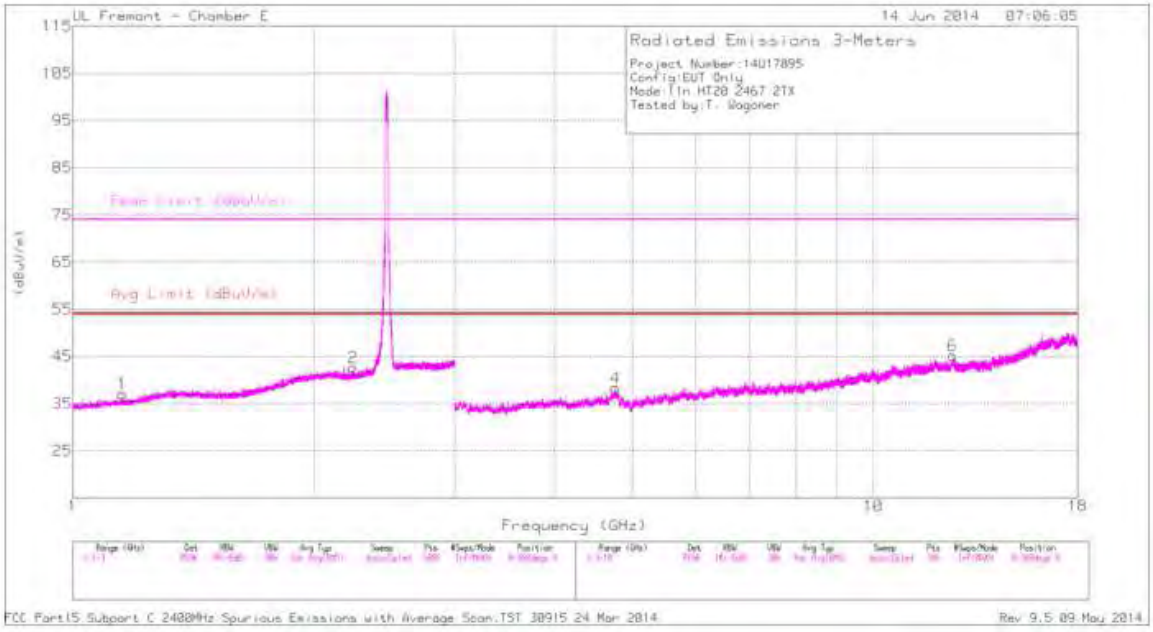
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.735	38.29	PK2	32.5	-23.9	46.89	-	-	74	-27.11	347	354	H
	* 2.735	31.67	MAv1	32.5	-23.9	40.27	54	-13.73	-	-	347	354	H
1	* 1.367	38.76	PK2	28.9	-26.6	41.06	-	-	74	-32.94	114	103	V
	* 1.365	32.19	MAv1	28.9	-26.6	34.49	54	-19.51	-	-	114	103	V
3	* 3.533	36.94	PK2	33	-31.9	38.04	-	-	74	-35.96	88	327	H
	* 3.531	30.38	MAv1	33	-31.9	31.48	54	-22.52	-	-	88	327	H
4	* 4.799	37.33	PK2	34.1	-31	40.43	-	-	74	-33.57	50	280	H
	* 4.799	30.35	MAv1	34.1	-31	33.45	54	-20.55	-	-	50	280	H
5	* 4.763	38.21	PK2	34.1	-31	41.31	-	-	74	-32.69	138	373	V
	* 4.763	31.28	MAv1	34.1	-31	34.38	54	-19.62	-	-	138	373	V
6	* 11.954	31.96	PK2	38.6	-22.3	48.26	-	-	74	-25.74	0	377	V
	* 11.957	24.84	MAv1	38.6	-22.3	41.14	54	-12.86	-	-	0	377	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

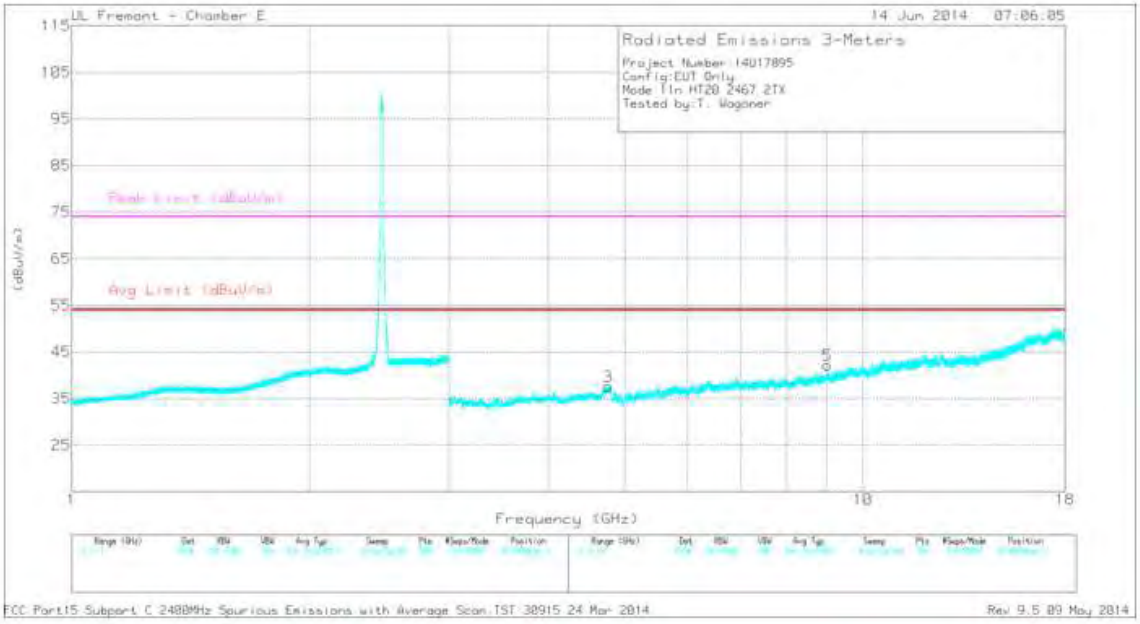
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 12



HIGH CHANNEL VERTICAL PLOT, CH 12



DATA

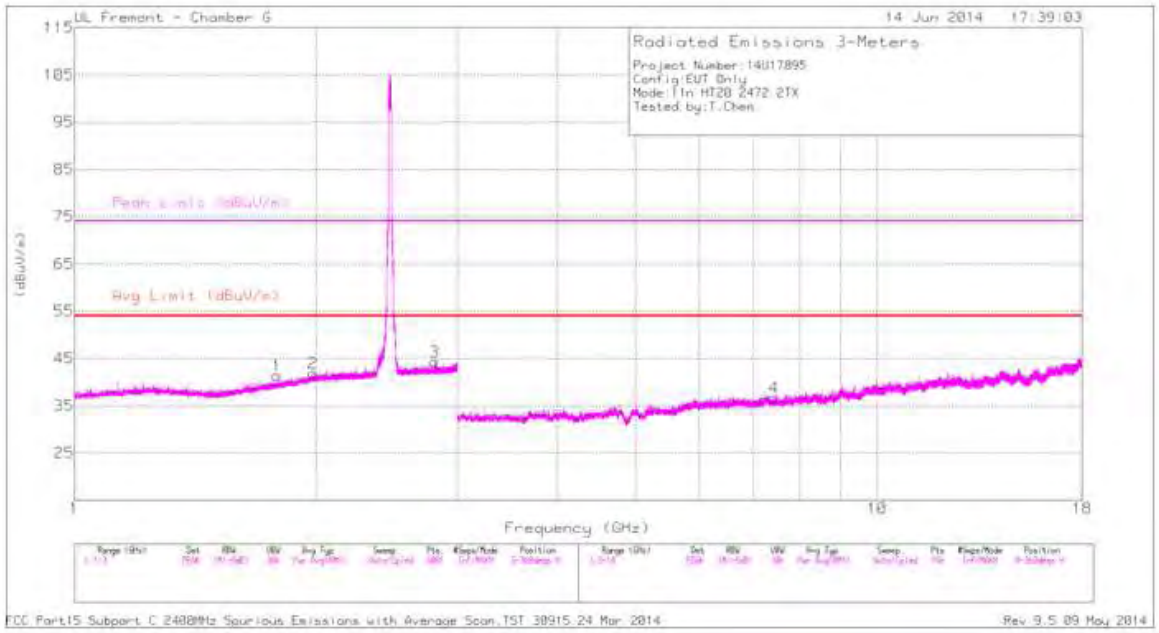
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.153	39.29	PK2	27.8	-27.7	39.39	-	-	74	-34.61	131	400	H
	* 1.154	32.6	MAv1	27.8	-27.7	32.7	54	-21.3	-	-	131	400	H
2	* 2.238	38.57	PK2	31.3	-25.2	44.67	-	-	74	-29.33	71	103	H
	* 2.239	31.96	MAv1	31.3	-25.2	38.06	54	-15.94	-	-	71	103	H
4	* 4.762	38.32	PK2	34.1	-31	41.42	-	-	74	-32.58	321	272	H
	* 4.762	31.38	MAv1	34.1	-31	34.48	54	-19.52	-	-	321	272	H
6	* 12.561	32.75	PK2	39	-23.3	48.45	-	-	74	-25.55	236	341	H
	* 12.557	25.71	MAv1	39	-23.2	41.51	54	-12.49	-	-	236	341	H
3	* 4.764	38.33	PK2	34.1	-31	41.43	-	-	74	-32.57	118	149	V
	* 4.764	31.33	MAv1	34.1	-31	34.43	54	-19.57	-	-	118	149	V
5	* 9.015	32.76	PK2	36.3	-24.9	44.16	-	-	74	-29.84	127	248	V
	* 9.016	25.73	MAv1	36.3	-24.9	37.13	54	-16.87	-	-	127	248	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

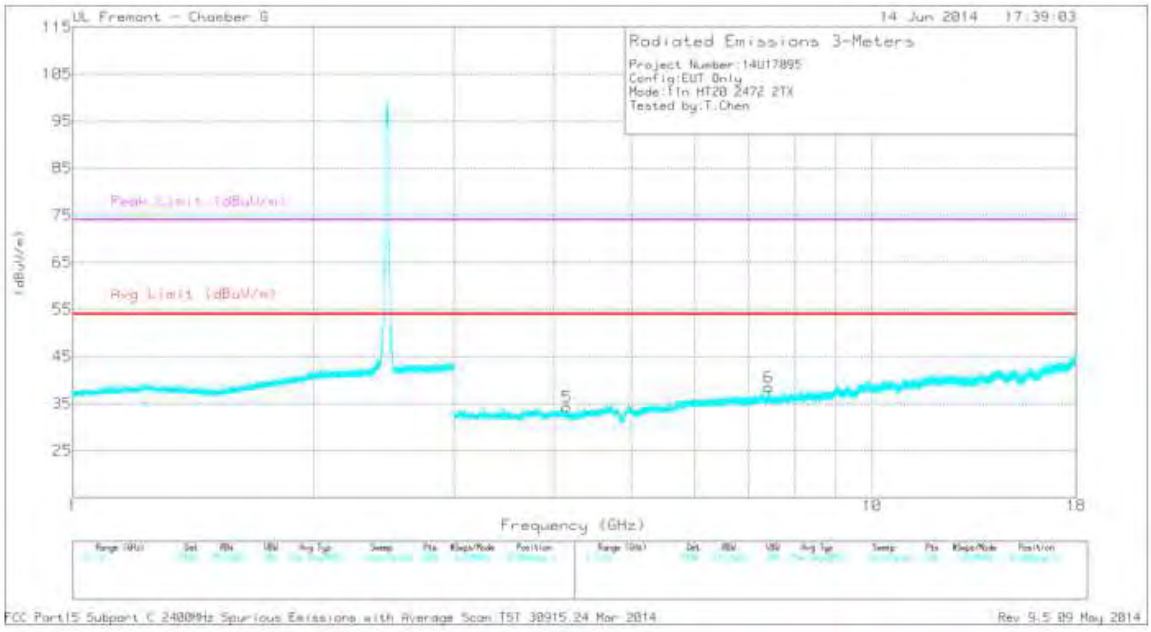
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 13



HIGH CHANNEL VERTICAL PLOT, CH 13



DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.809	44.06	PK2	32.2	-24.9	51.36	-	-	74	-22.64	119	122	H
* 2.809	32.42	MAv1	32.2	-24.9	39.72	54	-14.28	-	-	119	122	H
* 7.437	42.49	PK2	35.6	-31.4	46.69	-	-	74	-27.31	176	131	H
* 7.438	31.72	MAv1	35.6	-31.4	35.92	54	-18.08	-	-	176	131	H
* 4.148	44.08	PK2	33.4	-33.7	43.78	-	-	74	-30.22	201	161	V
* 4.149	32.86	MAv1	33.4	-33.7	32.56	54	-21.44	-	-	230	151	V
* 7.423	43.66	PK2	35.6	-31.5	47.76	-	-	74	-26.24	241	177	V
* 7.419	32.74	MAv1	35.6	-31.6	36.74	54	-17.26	-	-	281	220	V
1.787	43.58	PK2	29.9	-25.4	48.08	-	-	-	-	207	183	H
1.787	32.59	MAv1	29.9	-25.4	37.09	-	-	-	-	211	216	H
1.979	44.16	PK2	31.2	-25.4	49.96	-	-	-	-	303	264	H
1.98	32.59	MAv1	31.2	-25.4	38.39	-	-	-	-	145	165	H

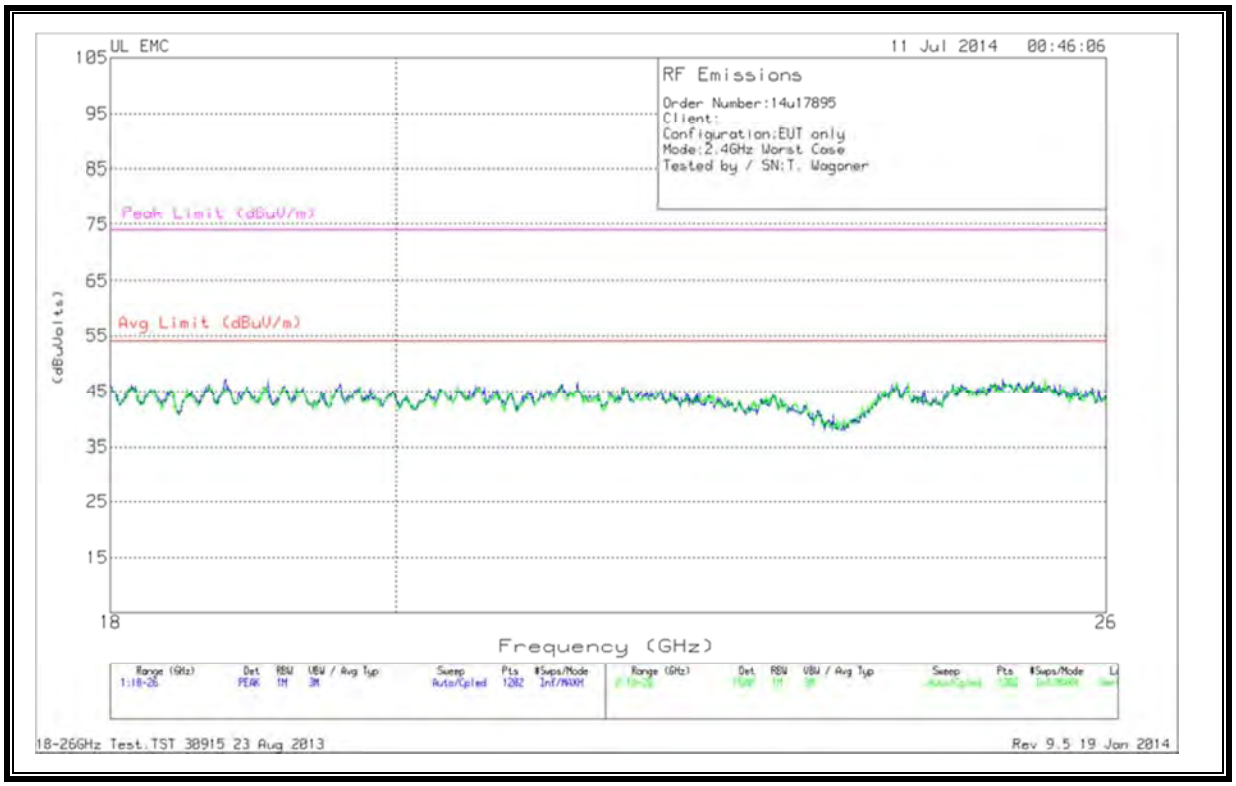
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

10.3. WORST-CASE ABOVE 18 to 26GHz

SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION, HORIZONTAL & VERTICAL)



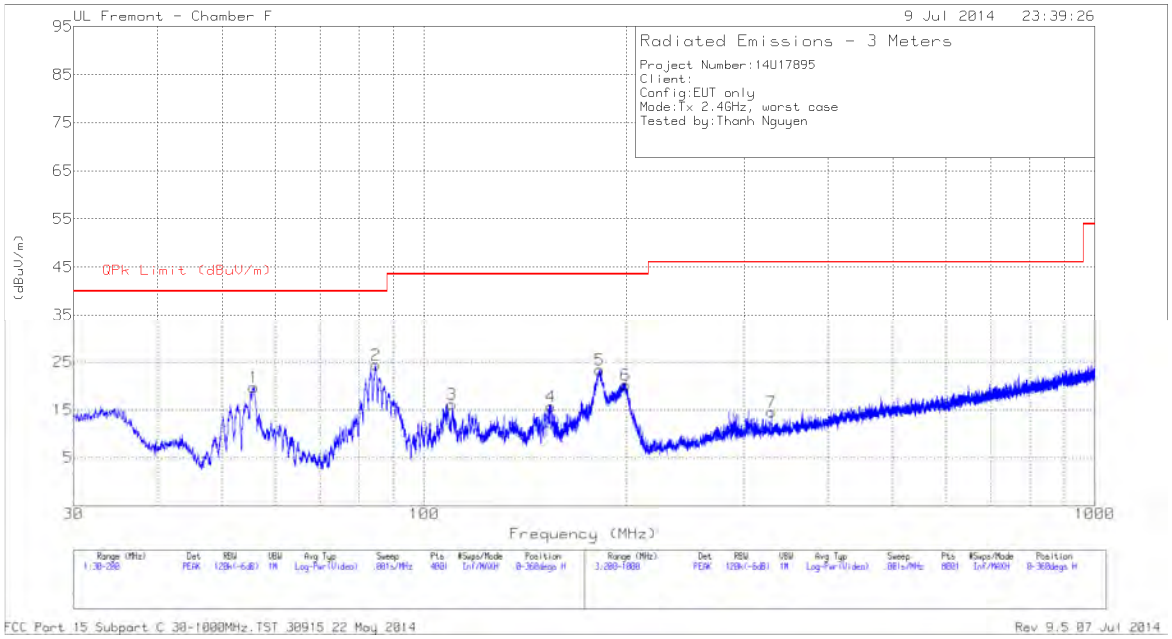
Note:

No signal were detected above 18-26GHz

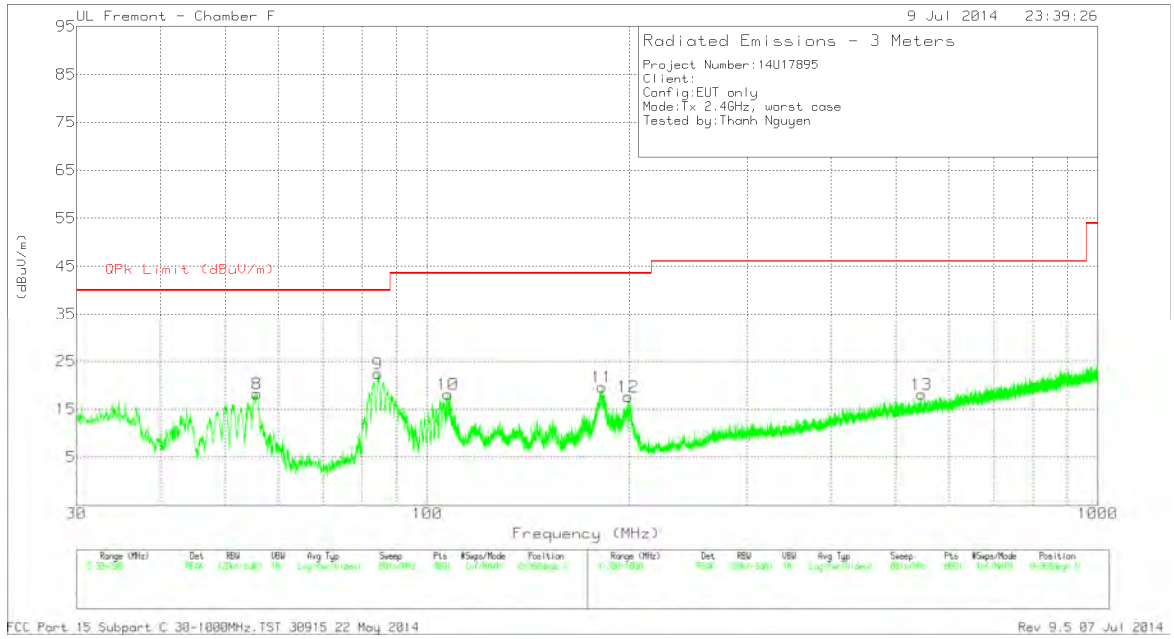
10.4. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T122 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	55.67	44.27	PK	7.3	-31.8	19.77	40	-20.23	0-360	401	H
2	84.6975	48.77	PK	7.4	-31.7	24.47	40	-15.53	0-360	201	H
3	* 110.1125	35.06	PK	12.7	-31.5	16.26	43.52	-27.26	0-360	301	H
4	154.4825	34.48	PK	12.5	-31.3	15.68	43.52	-27.84	0-360	201	H
5	182.4475	43.42	PK	11.1	-31.1	23.42	43.52	-20.1	0-360	201	H
6	199.66	38.62	PK	12.8	-31.1	20.32	43.52	-23.2	0-360	100	H
8	55.7125	42.78	PK	7.3	-31.8	18.28	40	-21.72	0-360	100	V
9	84.485	46.73	PK	7.4	-31.7	22.43	40	-17.57	0-360	100	V
10	107.3925	37.37	PK	12.2	-31.5	18.07	43.52	-25.45	0-360	100	V
11	182.235	39.58	PK	11.1	-31.1	19.58	43.52	-23.94	0-360	100	V
12	199.5325	35.96	PK	12.8	-31.1	17.66	43.52	-25.86	0-360	100	V
7	* 329.8	31.17	PK	14	-30.6	14.57	46.02	-31.45	0-360	100	H
13	545.4	30.07	PK	18.2	-30.1	18.17	46.02	-27.85	0-360	201	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

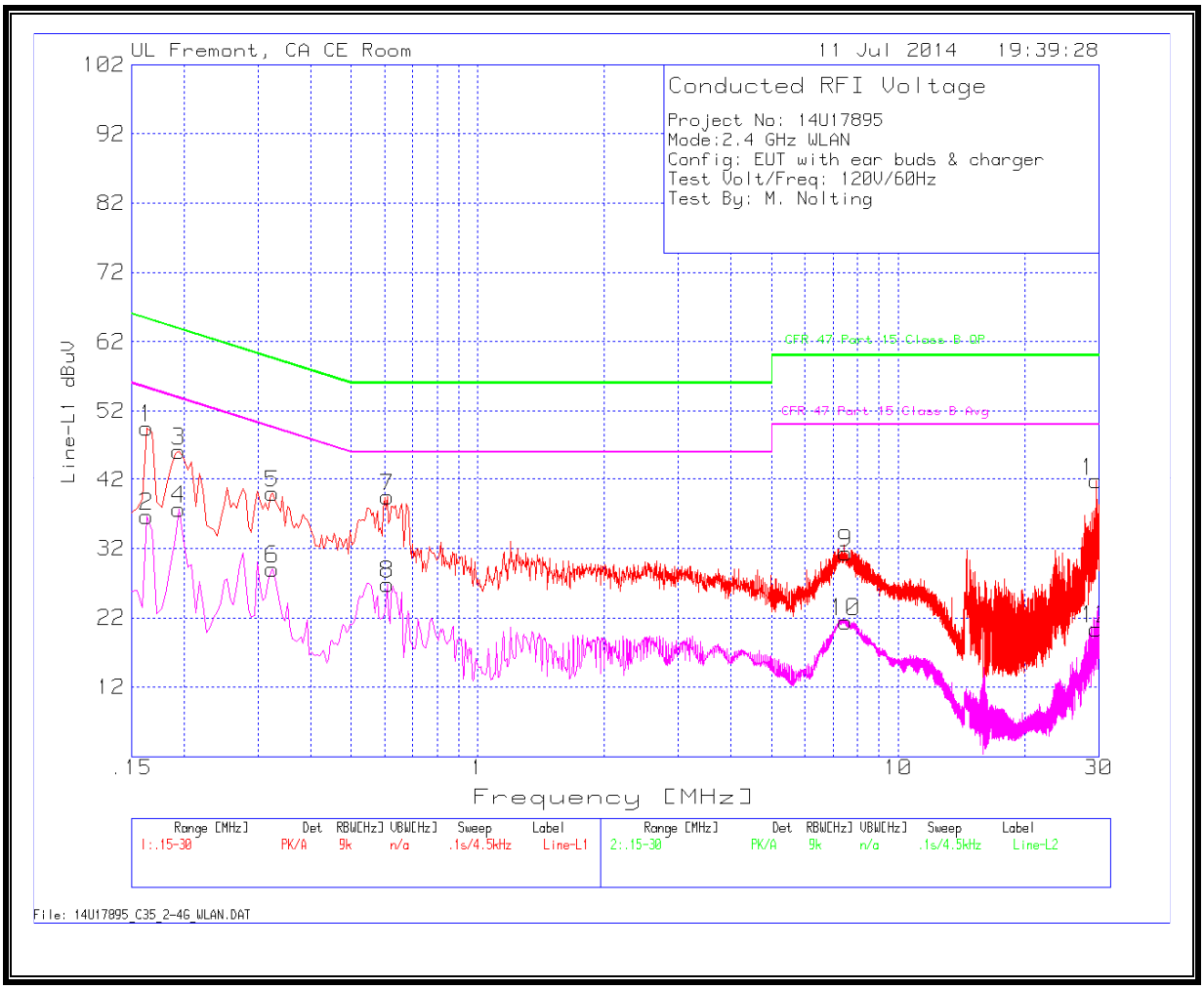
LINE 1 RESULTS

Trace Markers										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin to Limit (dB)	CFR 47 Part 15 Class B Avg	Margin to Limit (dB)
1	.1635	48.3	PK	1.2	0	49.5	65.3	-15.8	-	-
2	.1635	35.48	Av	1.2	0	36.68	-	-	55.3	-18.62
3	.195	45.21	PK	1	0	46.21	63.8	-17.59	-	-
4	.195	36.61	Av	1	0	37.61	-	-	53.8	-16.19
5	.3255	39.46	PK	.5	0	39.96	59.6	-19.64	-	-
6	.3255	28.52	Av	.5	0	29.02	-	-	49.6	-20.58
7	.609	39.17	PK	.3	0	39.47	56	-16.53	-	-
8	.609	26.5	Av	.3	0	26.8	-	-	46	-19.2
9	7.485	31.03	PK	.2	.1	31.33	60	-28.67	-	-
10	7.485	21.13	Av	.2	.1	21.43	-	-	50	-28.57
11	29.625	41.19	PK	.3	.3	41.79	60	-18.21	-	-
12	29.625	19.84	Av	.3	.3	20.44	-	-	50	-29.56

LINE 2 RESULTS

Trace Markers										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin to Limit (dB)	CFR 47 Part 15 Class B Avg	Margin to Limit (dB)
13	.15	55.7	PK	1.5	0	57.2	66	-8.8	-	-
14	.15	37.35	Av	1.5	0	38.85	-	-	56	-17.15
15	.168	54.55	PK	1.3	0	55.85	65.1	-9.25	-	-
16	.168	28.29	Av	1.3	0	29.59	-	-	55.1	-25.51
17	.339	46.42	PK	.5	0	46.92	59.2	-12.28	-	-
18	.339	20.88	Av	.5	0	21.38	-	-	49.2	-27.82
19	.6225	40.15	PK	.3	0	40.45	56	-15.55	-	-
20	.6225	19.56	Av	.3	0	19.86	-	-	46	-26.14
21	.843	38.97	PK	.3	.1	39.37	56	-16.63	-	-
22	.843	16.36	Av	.3	.1	16.76	-	-	46	-29.24
23	7.2825	34.3	PK	.2	.1	34.6	60	-25.4	-	-
24	7.2825	24.47	Av	.2	.1	24.77	-	-	50	-25.23

LINE 1 PLOTS



LINE 2 PLOT